Research Article

Executives' Compensation, Managerial Power, and Earning Management: A Case Study of Thai Firm Listed in the Stock Exchange of Thailand (SET)*

Dr.Rojana Khunkaew

Lecturer of Department of Accountancy,

Faculty of Management Sciences, Prince of Songkla University

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ABSTRACT

This study aims to investigate the association between executive compensation and earnings management (EM), and the impact of managerial power on the relationship, by examining the data of 1,408 Thai firm observations in the Stock Exchange of Thailand (SET) from 2013 to 2017. Descriptive analysis, correlation, and multiple regressions were used to analyze. The findings reveal that short-term benefits for executives have a negative association with accruals earnings management (AEM), in contrast, there is a positive association with real activities earnings management (REM). While, post-employment benefits have positive related with AEM and no significant related with REM. Furthermore, regarding the managerial power impact, this study found that executive shareholding and dual position of executives moderated the relationship between executives 'compensation and earnings management, especially in AEM. In addition, this study examines and provides evidence for this association based on family and non-family firms. The findings support agency theory regarding conflict of interest, executives have the incentive to manage earnings not only for the benefit of the business but also to receive benefits of their own. However, good corporate governance can be an instrument to control or reduce earnings management behavior. Companies can consider using mechanisms that are suitable for the business and organizational structure, which will lead to credibility and sustainability of the company.

Keywords: Executives Compensation, Managerial Power, Accruals Earnings Management (AEM), Real activities Earnings Management (REM)

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บทความวิจัย

ค่าตอบแทนผู้บริหาร อำนาจในการบริหาร และการจัดการกำไร : กรณีศึกษาบริษัทจดทะเบียนในตลาดหลักทรัพย์แห่งประเทศไทย

ดร.รจนา ขุนแก้ว
อาจารย์ประจำสาขาวิชาการบัญชี
คณะวิทยาการจัดการ มหาวิทยาลัยสงขลานครินทร์

วันที่ได้รับต้นฉบับบทความ : *28 ตุลาคม 2565*
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บทคัดย่อ

การศึกษามีวัตถุประสงค์เพื่อทดสอบความสัมพันธ์ระหว่างค่าตอบแทนของผู้บริหารและการจัดการกำไร (Earnings Management) รวมถึงศึกษาอิทธิพลของอำนาจในการบริหารที่มีต่อความสัมพันธ์ดังกล่าว โดยเก็บรวมรวมและวิเคราะห์ข้อมูลของบริษัทจดทะเบียนในตลาดหลักทรัพย์แห่งประเทศไทย รวม 1,408 ตัวอย่าง นับแต่ปี พ.ศ. 2556-2560 ผู้วิจัยได้ใช้สถิติเชิงพรรณนา การทดสอบสหสัมพันธ์และการวิเคราะห์ความสัมพันธ์เชิงพหุในการวิเคราะห์ข้อมูล ผลการวิจัยพบว่าผลประโยชน์ระยะสั้นของผู้บริหารมีความสัมพันธ์เชิงลบกับการจัดการกำไรผ่านรายการคงค้าง (AEM) ในทางตรงกันข้ามกลับมีความสัมพันธ์เชิงบวกกับการจัดการกำไรผ่านกิจกรรมดำเนินงาน (REM) ในขณะที่ผลการศึกษาเกี่ยวกับผลประโยชน์หลังออกจากงานมีความสัมพันธ์ในเชิงบวกต่อการจัดการกำไรผ่านรายการคงค้าง หากแต่ไม่มีความสัมพันธ์อย่างมีนัยสำคัญต่อการจัดการกำไรผ่านกิจกรรมดำเนินงาน นอกจากนี้จากการศึกษาอิทธิพลของอำนาจในการบริหาร ผลการศึกษายังพบว่าสัดส่วนการถือหุ้นและการควบรวมตำแหน่งของผู้บริหารมีอิทธิพลต่อความสัมพันธ์ระหว่างค่าตอบแทนผู้บริหารและการจัดการกำไร โดยเฉพาะอย่างยิ่งในส่วนของการจัดการกำไรผ่านรายการคงค้าง ในการศึกษายังได้วิเคราะห์ความสัมพันธ์โดยจำแนกกลุ่มตัวอย่างตามโครงสร้างของบริษัทคือมีลักษณะเป็นธุรกิจครอบครัวและไม่ใช่ธุรกิจครอบครัว โดยผลการศึกษาสนับสนุนหลักการตามทฤษฎีตัวแทนเกี่ยวกับความขัดแย้งทางผลประโยชน์ กล่าวคือ ผู้บริหารมีแรงจูงใจในการจัดการกำไร ไม่เพียงแต่เพื่อประโยชน์ของธุรกิจหากแต่ยังเพื่อผลประโยชน์ของตนเองด้วยเช่นกัน อย่างไรก็ตาม กลไกการกำกับดูแลกิจการเป็นเครื่องมือหนึ่งในการควบคุมและลดพฤติกรรมการจัดการกำไร โดยบริษัทสามารถพิจารณาใช้กลไกที่เหมาะสมกับลักษณะของธุรกิจและโครงสร้างองค์กร อันจะนำมาซึ่งความน่าเชื่อถือและความยั่งยืนของบริษัท

คำสำคัญ: ค่าตอบแทนผู้บริหาร อำนาจในการบริหาร การจัดการกำไรผ่านรายการคงค้าง (AEM) การจัดการกำไรผ่านกิจกรรมดำเนินงาน (REM)

1. Introduction

Accounting scandals in the United States have included energy and telecommunications companies, such as in the previous case of Enron and WorldCom bankruptcy, there was evidence indicating that Enron removed large liabilities from its accounts and financial statements. And after WorldCom managed transactions recording the transfer of expenses to assets, leading to inflated assets on its balance sheet, WorldCom showed higher profitability due to refurbishment (Brickey, 2003). After these scandals, in July 2002 the United States passed a law called the Sarbanes-Oxley Act, or SOX, intended to protect investors by refining company accounts and implementing requirements for the executive to assess internal controls and verify the accuracy and reliability of company disclosures. However, the accounting transactions are still managed but the method has been adapted. Cohen et al. (2008) studied management behavior before and after the Sarbanes-Oxley Act in 2002, and results revealed an increase in accruals earnings management over the period 1987–2002; in contrast, real activities earnings management decreased in the past and increased after SOX.

In general, a business management system involves the appointment of an agent to act as a business manager instead of the shareholders or business owners. Jensen and Meckling (1976) mentioned that an agency problem can occur if the purpose and benefits of the agent are inconsistent. For example, a conflict of interest can occur when the agents focus more on their own benefits rather than on their duty; and the adverse selection problem means that shareholders or owners cannot ensure that agents or administrators have the ability to work properly with their compensation. Based on agency theory, managers are pressured by owners or shareholders because they are expected to meet a high earnings number, and when management's compensation is related to profitability that is an incentive for the managers to manage earnings to receive higher compensation, especially when the form of compensation is the stock option (Johl, Fugaban Murphy, & Khan, 2010; Katz, 2009). In addition, shareholding is another incentive for managers, if their benefits are in the form of dividends and a high market price per share (Bergstresser & Philippon, 2006; Cheng & Warfield, 2005).

The corporate governance mechanism can reduce conflicts or problems that arise from agency theory, and shareholding structure is an important factor that can be used to enhance the efficiency of corporate governance, which is classified into dispersed ownership and concentrated ownership (Djankov, La Porta, Lopez-de-Silanes, & Shleifer, 2008; La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 2000). A dispersed ownership structure is a business with many shareholders in the minority shareholding block that leads to a conflict between outside shareholders and the executive about who has the right to control the business. The solution based on agency theory is providing a sufficient proportion of shareholding in order to receive benefits, which leads the agent in the same direction as the

business interests (Jensen & Meckling, 1976). While a concentration ownership structure is a business with few major shareholders who have large shareholdings, and major shareholders have more power to control the business. The problem is the conflict between benefits for outside investors and shareholders who have the power to control the business. Shareholders who control the business can use their power both positively and negatively, which is the power to control resources usage to maximize business success or use resources for personal benefit. In addition, board effectiveness is another element of corporate governance. The board of directors is one of the internal mechanisms of good governance to control executives' performance; the board can directly control and motivate the executive to work for shareholders by using compensation strategies. Based on prior research, the performance of the executive committee and the audit committee have been shown to affect earnings management, by using performance indicators such as the number of board members, board independence, meeting frequency, knowledge of finance, and factors related to the role of the audit committee (Bradbury, Mak, & Tan, 2006; Lin, Li, & Yang, 2006; Peasnell, Pope, & Young, 2005; Piot & Janin, 2007; Xie, Davidson, & DaDalt, 2003).

Regarding corporate governance in Thailand, the Stock Exchange of Thailand (2017) (SET) defines corporate governance as "A system that provides a structure and process of relations between board of directors, management team and shareholders, to create competitiveness and add long-term value to shareholders including the importance of other stakeholders". Good corporate governance can reflect the business management standard, enhancing operational transparency and executives' performance. Moreover, SET identifies that compensation should be comparable in industry, for the executive compensation should be determined according to the principles approved at shareholders' meetings. The level of compensation in terms of salary, bonuses, and incentives should be consistent with the performance of the executive. In addition, because high executive compensation might reflect weak corporate governance, companies should disclose the policy and amount of compensation paid to directors and executives in their annual reports to demonstrate transparency in paying compensation. Regarding Thai corporate governance, the SET study found it not significantly different from other corporate governance worldwide; however, in measuring family firms by the proportion of ownership of a family founder and/or family member serving on the board of directors, the study showed that about 50% of firm observations were for family firms. Consequently, a corporate governance mechanism might have significant influence in different ways according to the business structure.

The reasons above show that the executive is involved in earnings management for the purpose of creating a good image for the business, presenting the effectiveness of the management, and getting personal benefits in the form of compensation and dividends. Studies in the literature reveal that there

are different ways of the association between executive compensation and earnings management, as positive, negative, and no relationship, but most previous studies have been based on developed countries and compensation paid by stock option. Therefore, the first objective of the current study is to examine the association between executive compensation and earnings management behavior in Thailand, by using two approaches of earnings management—accruals and real activities earnings management—because prior research has found that managers use both approaches simultaneously at different levels (Cohen, Dey, & Lys, 2008; Cohen & Zarowin, 2010; A. Zang, 2007). In addition, because most executive compensation in Thailand is paid by cash, this study measured executive compensation by classifying it into two categories, short-term benefits and post-employment benefits, to reflect more clearly the relationship based on the types of compensation.

The literature reveals that there are a large number of research studies examining the impact of executive compensation or corporate governance mechanisms on earnings management. Prior studies have found that good corporate governance influences executive compensation and discretionary accruals earnings management levels (Cornett, Marcus, & Tehranian, 2008; Ozkan, 2007). This study performs a deeper investigation by creating an interactive variable between executive compensation and two factors of managerial power (shareholding and dual position). The result can identify that shareholding and a dual position of executive can reduce the motivation of executives to manage earnings in order to get their compensation. Thus, the second objective is to investigate the influence of managerial power on the relationship between executive compensation and earnings management.

For these research objectives, this study uses a sample of listed Thai firms in the period 2013–2017, including 1,408 observations, which represent seven industries: agriculture and food, consumer products, industrials, property and construction, resources, services, and the technology industry. The investigation is based on executive compensation that was disclosed in the annual registration statement (Form 56-1) in the form of short-term and post-employment benefits.

The results reveal that the impact of short-term benefits is greater than post-employment benefits, which found a negative impact of short-term benefits on accruals earnings management (AEM); in contrast, there was a positive impact on real activities earnings management (REM). As the results, part of the reason caused by a limitation of earnings management through accruals that may be detected by the auditor (Cohen et al., 2008). Meanwhile, REM is another approach that they can apply to manipulate earnings and it is difficult to detect, although receiving higher short-term benefits, they still have an incentive and opportunities to manage earnings. In other words, executives can manage earnings through real activities operation to gain their short-term benefits. Regarding post-employment benefits, there is a positive influence of post-employment benefits on AEM, while

no significant influence on REM. Supported, there are evidences reveal that firms with CEOs are nearing retirement age have large discretionary accruals in the year prior to turnover (Davidson, Xie, Xu, & Ning, 2007; Mather & Ramsay, 2006)

Based on the second objective about the influence of managerial power, the results show that executive shareholding moderated the relationship between short-term benefits and both AEM and REM. A part of post-employment benefits, the results reveal that executive shareholding and dual position can reduce the relationship between post-employment benefits and AEM. Regarding real activities earnings management (REM), the evidence shows that executive shareholding and dual position have significantly reduced the relationship between short-term benefits and REM. The study reflects that although executives have high managerial power, this does not lead to an increased incentive to manage earnings through operational activities, consistent with prior research (Ali, Salleh, & Hassan, 2008; Alves, 2012; Aupipat, 2016). Moreover, this study conducts a deeper examination by classifying the observations into family and non-family firms, finding significantly different relationships for the different levels.

The paper is organized as follows: Section 2 presents the literature and hypothesis development, Section 3 describes the research methodology, Section 4 displays the analysis and empirical results, Section 5 conclusion, and Section 6 limitations and suggestions for future studies.

2. Literature Review and Hypotheses Development

2.1 Executive Compensation and Earnings Management

In the field of business administration, the motivation of the executive is one of the key factors that could lead the organization to success; in contrast, it could lead to bankruptcy as well. Earnings management is executives' behavior that is influenced by motivation. Because executives are the individuals whom owners or shareholders have hired to work for business operations, this role comes with an extrinsic motivation that can be both positive and negative. Prior research has mentioned executive motivation around earnings management as an attitude and in terms of benefits (including altruistic, selfish, and behavioral convictions), and under pressure from affiliated parties such as stakeholders, creditors, and analysts (Chen & Tsai, 2010). Consistent with previous reviews of earnings management around earnings benchmarks, researchers have found the executive motivation to manage earnings by avoiding the reporting of four types of information: loss from operations, lower operating performance results than in the past, lower performance than previously announced to investors, and lower performance than investor expectations (Habib & Hansen, 2009). This study focuses on extrinsic motivation in terms of positive reinforcement, based on the literature showing

that one of the keys that drive executives to manage earnings is the benefits that they will receive, including compensation and dividends.

Achilles, Blaskovich, and Pitre (2013) examined the effect of the compensation incentive and motivation on earnings management, based on 90 MBA students who were assuming the role of financial executive. They found that when executive compensation is tied to firm performance, managers try to beat the earnings forecast by increasing income, but when firms' earnings are higher than forecast, they will report the current earnings. Consistent with an empirical study in Thailand, Khawsa-ad (2012) studied the factors related to the level of earnings management based on listed companies that reported a positive net profit in Thailand, finding that executive compensation is positively related to earnings management, which supports the notion that the business often determines executive compensation based on performance. Moreover, there was evidence revealing that in firms that tied executive compensation to the value of stock and stock holding, executives will use more discretionary accruals to manage the report (Bergstresser & Philippon, 2006).

The evidence of Japanese firm listed, Shuto (2007) studied the executive compensation of 16,386 firm-year observations in Japan over the period 1991–2000, during which time there was no obligation to disclose details of executive compensation on an individual basis in Japan, and compensation was measured as the total cash compensation consisting of salary and bonuses. Results showed that executive compensation is increased by using discretionary accruals, moreover, the evidence revealed income decreasing in firms that have no bonus for the executive, which can be interpreted as the big bath earnings management in Japan affected by the executive did not receive bonuses. Supported, Shrieves and Gao (2002) studied executive compensation and earnings management bonuses and stock options had a positive association with discretionary accruals, and the restricted stock had a weakly positive association. To explain the results, regarding bonuses and stock options, the results showed that there are non-linear payoffs from those factors of managerial incentive to manage earnings. Regarding the restricted stock, the study found linear payoffs on the stock price that leads to less incentive for managers to manage earnings.

Additional evidence of stock compensation, Meek, Rao, and Skousen (2007) examined stock option compensation and accruals earnings management by collecting data over the period 1993–2001 from Standard and Poor's ExecuComp database. The study explored the effect of stock options on earnings management using different firm characteristics (large firms, growth firms, new economy firms, and more recently) by measuring earnings management as two models: the modified Jones model and the performance-matched model. The results showed a positive relationship between CEO stock option compensation and discretionary accruals, arguing that large firms are lowly affected by

earnings management based on the stock option incentive caused of there is good monitoring and less asymmetry of information. In contrast, there was a strong effect of stock option incentives on earnings management in growth firms and new economy firms, and found a consistency of results with the expectations, there is an intense affected in recent years. Consistent with Cheng and Warfield (2005), who studied managers' incentives by measuring the equity incentive as stock-based compensation and stock ownership, using data from 1993–2000. They found a positive association between equity incentive and earnings management, managers engaged in earnings management through an accruals approach in order to get the benefit of smoothing earnings and to be able to easily beat future forecasts. However, the results also found that earnings management leads to an increase in the value of the share and a high number of shares sold in the year that showed high discretionary accruals; this revealed that executives can receive benefits by selling shares at a higher price.

While, the study of Limsuthiwanpum and Chaimankong (2015) found a negative association between executive compensation and accruals earnings management in the case of energy and utilities. This may be due to the fact that executives in this industry consider the importance of good corporate governance because the appointment of an audit committee and independent directors are mandatory, as specified by the Stock Exchange of Thailand. In addition, the executive is concerned about the disadvantages in terms of reputation and the value of other damage for which the executive has to take responsibility. Consistent with the study of Shrieves and Gao (2002), researchers found a negative association between salary and discretionary accruals, and long-term incentives had no relationship with discretionary accruals. To explain the results, the manager who has a fixed salary tends to engage less in earnings management due to the recognition of a bad reputation and job losses. While, the long-term incentive factor, meaning long-term compensation from the company's performance over the next three to five years, the incentives to manage earnings are likely to mitigate. In another hand, Teerawanichtrakool (2010) found that there was no relationship between executive compensation and absolute discretionary accruals.

Based on previous studies in Thailand, where many researchers have focused on AEM, this study attempts to provide empirical evidence about earnings management through operations activities. Therefore, this study aims to investigate the association between executive compensation and earning management by following the modified Jones model to estimate AEM as discretionary accruals (Dechow, Sloan, & Sweeney, 1995), and following Roychowdhury (2006) to measure REM consisting of three factors: abnormal cash flow operation, abnormal discretionary accruals, and abnormal production. Thus, we propose the following hypothesis:

H1 there is a positive association between executives' compensation and AEM.

H2 there is a positive association between executives' compensation and REM.

2.2 The Influence of Corporate Governance on the Relationship between Executive Compensation and Earnings Management

Corporate governance is an important instrument in business that can reflect the transparency of operational activities and lead the business to success. Firms that have good monitoring in terms of institutional ownership, the role of the institution, and independent directors show a lower level of management discretion (Cornett et al., 2008). However, studies have found a significant impact of corporate governance on the level of executive compensation, especially the structure of the board and ownership of the company (Ozkan, 2007). And in firms with poor corporate governance, executive compensation is related to accounting numbers or performance indicators that the executive can control or manage, such as using return on assets instead of return on equity (Davila & Penalva, 2006).

Alves (2012) examined the association between ownership structure and earnings management of 204 firm-year observations in Portugal from 2002 to 2007, by measuring the owner as managerial ownership, ownership concentration, and institutional ownership. The results revealed that earnings management through discretionary accruals has a negative association with managerial ownership and ownership concentration. The result implies a decrease in earnings management influenced by managerial ownership and ownership concentration, reflecting an increase in earnings quality and more reliable financial information. Supported, Ali et al. (2008) studied the association between managerial ownership and earnings management by collecting secondary data from the annual reports of 1,001 listed Malaysian firms from 2002 to 2003. The study also investigated the influence of firm size on the relationship between managerial ownership and earnings management, with results that showed a negative association between management ownership and discretionary accruals. However, the evidence from Thai firm listed in 2016 reveals that a high percentage of shareholding has a positive influence on incentives to manage earnings for higher compensation (Aupipat, 2016).

According to previous studies, the influence of executive shareholding on the relationship between executives' compensation and earnings management is still inconclusive. However, the remuneration structure and good corporate governance is a mechanism that can reduce agency costs and conflict of interest between manager and shareholder. Executives' shareholding can affect firm value, one reason for paying stock options is that allows executives to be a part of ownership that may cause executives to prioritize shareholder benefits and the business sustainability. Therefore, executives

might have a lower incentive to menage earnings in order to preserve firm value and also achieve long-term benefits for themselves.

H3 There is a negative influence of executive shareholding on the association between executives' compensation and earnings management.

In a part of the dual position factor, Aupipat (2016) studied the relationship between executive compensation and accruals earnings management, and examined the direction of relationships under the impact of corporate governance. The results showed a positive association between executive compensation and accruals earnings management, implying that executives use management opportunistically by distorting firm performance to increase their compensation. In addition, the results revealed that corporate governance influences the relationship between compensation and profit management. Executives having dual position does not lead to an increased incentive to manage earnings. In terms of the compensation committee structure, firms with a high proportion of having the same group of members on the audit committee and the remuneration committee would show a lower level of the relationship between compensation and earnings management. While, Bouaziz, Salhi, and Jarboui (2020) revealed an evidence from France that CEO duality has a positive influence on earnings management.

According to the good corporate governance, The Board of Directors is responsible for ensuring that all directors and executives perform their duties with accountability (duty of care) and honesty to the organization (duty of loyalty) and ensure that operations are in compliance with laws, regulations and shareholders' resolutions. Therefore, when CEO holding Chairman position, which gives the CEO more power and may take advantage for personal gain. CEO duality reduces the ability of monitoring the business that increases the agency problem. Hence, the study forms the following hypothesis:

H4 There is a positive influence of the dual position of executives on the association between executives' compensation and earnings management.

3. Data and Sample Selection

This study aimed to investigate the association of executives' compensation, managerial power, and earnings management based on listed Thai firms on the Stock Exchange of Thailand (SET). The data were collected from annual reports, annual registration statements (Form 56-1), and the firms' performance as shown in the SETSMART database from 2013 to 2017.

Table 1 presents the distribution of the final sample. The top three industries are industry, services, and property and construction, representing 21.88, 20.81, and 19.60 percent of the sample, respectively.

Table 1 Final Sample by Each Industry and Year

No.	industry	Year					Total	%
		2013	2014	2015	2016	2017		
1	Agro & Food	31	33	32	35	35	166	11.79
2	Consumer Products	23	26	25	26	27	127	9.02
3	Industrials	58	61	64	65	60	308	21.88
4	Property & Construction	49	56	54	58	59	276	19.60
5	Resources	24	27	26	27	29	133	9.45
6	Services	54	59	61	60	59	293	20.81
7	Technology	22	20	21	21	21	105	7.46
	Total	**261**	**282**	**283**	**292**	**290**	**1,408**	**100**

3.1 Variable Definition and Analysis Model

3.1.1 Dependent Variables

Accruals Earnings Management

Dechow et al. (1995) presented the most powerful model to evaluate earnings management, which is the Modified Jones Model. It was modified by increasing the change of receivables in the model of Jones (1991) as follow:

$$\frac{TA_t}{A_{t-1}} = \alpha_1 \frac{1}{A_{t-1}} + \alpha_2 \frac{\Delta REV_t - \Delta AR_t}{A_{t-1}} + \alpha_3 \frac{PPE}{A_{t-1}} + \varepsilon_t \quad (1)$$

Where: TA_t = the difference between earnings before extraordinary and the cash flows of operation in the statement of cash flow in year t; A_{t-1} = the total assets at the end of year $t-1$; ΔREV_t = the change of revenue in year t = $REV_t - REV_{t-1}$; ΔAR_t = the change of account receivable in year t = $AR_t - AR_{t-1}$; PPE = the gross of property, plant, and equipment in year t.

From the equation above, that used to estimate the non-discretionary accruals (NDA) or the normal accruals (NA) below:

$$NDA_{i,t} = \alpha_1 \frac{1}{A_{i,t-1}} + \alpha_2 \frac{\Delta REV_{i,t} - \Delta AR_{i,t}}{A_{i,t-1}} + \alpha_3 \frac{PPE_{i,t}}{A_{i,t-1}} + \varepsilon_{it} \quad (2)$$

Where $\Delta AR_t = AR_T - AR_{T-1}$ that is the change in accounts receivable in year. The proxy for estimates discretionary accrual (DA) as:

$$DA_{i,t} = \frac{TA_{i,t}}{A_{i,t-1}} - NA_{it} \quad (3)$$

Real activities Earnings Management

This study follows the model of Roychowdhury (2006) for measuring real earning management, which consists of three factors that are abnormal cash flow of operation, abnormal discretionary expense, and abnormal production.

First, abnormal cash flow of operations can measure by the difference between the actual CFO and the normal CFO in every firm year. Normal CFO using the following model:

$$\frac{CFO_t}{A_{t-1}} = \alpha_0 + \alpha_1 \frac{1}{A_{t-1}} + \alpha_2 \frac{S_t}{A_{t-1}} + \alpha_3 \frac{\Delta S_t}{A_{t-1}} + \varepsilon_t \quad (4)$$

Where CFO_t = Cash flows from operations; S_t = sales in period t; ΔS_t = change in sales; A_t = total assets gagged by one period. The second model is the estimation of abnormal reduction of discretionary expenses by the following:

$$\frac{DISEX_t}{A_{t-1}} = \alpha_0 + \alpha_1 \frac{1}{A_{t-1}} + \alpha_2 \frac{S_t}{A_{t-1}} + \varepsilon_t \quad (5)$$

Where $DISEX_t$ = the sum of research and development, sales, general and administrative, and advertising expenses; S_t = sales in period t; ΔS_t = change in sales; A_t = total assets gagged by one period. The third model is the estimation of overproduction to meet the low cost of goods sold and make earnings upward.

$$\frac{PROD_t}{A_{t-1}} = \alpha_0 + \alpha_1 \frac{1}{A_{t-1}} + \alpha_2 \frac{S_t}{A_{t-1}} + \alpha_3 \frac{\Delta S_t}{A_{t-1}} + \alpha_4 \frac{\Delta S_{t-1}}{A_{t-1}} + \varepsilon_t \quad (6)$$

Where $PROD_t$ = the sum of costs of goods sold and the change in inventories in year t; S_t = sales in period t; ΔS_t = change in sales year t; ΔS_{t-1} = change in sales year t–1 A_t = total assets gagged by one period.

According to three models to capture REM, abnormal production (AB_PROD), abnormal cash flow operation (AB_CFO), and abnormal discretionary expense (AB_DISEX). This study follows prior study (Cohen et al., 2008; Cohen & Zarowin, 2010; Li, Tseng, & Chen, 2016; Wu, Gao, & Gu, 2015; A. Y. Zang, 2012) to proxy REM as a mean of abnormal production minus mean of abnormal cash flow operation and mean of discretionary expense ($REM_{i,t} = AB\_PROD_{i,t} - AB\_CFO_{i,t} - AB\_DISEX_{i,t}$), where AB_CFO and AB_DISEX are multiplied by minus 1. In addition, due to three individual variables influence to earnings in a different direction, this study report result of REM by four elements including $REM_{i,t}$, as the proxy and the individual variables, $AB\_PROD_{i,t}$, $AB\_CFO_{i,t}$ and $AB\_DISEX_{i,t}$.

3.1.2 Independent Variables

According to the agency theory and literature of executives' motivation around earnings management, executive is the people who hired form owners or stakeholders to operate the business under the pressure to meet high profit, it is a motivation for executive to manage earnings that not only for owner satisfaction but also for their benefit in term of dividend and compensation (Achilles et al., 2013; Baker, Collins, & Reitenga, 2003; Bergstresser & Philippon, 2006; Cheng & Warfield, 2005; Chi, Hung, Cheng, & Lieu, 2015; Jiraporn & DaDalt, 2009; Lovata, Schoenecker, & Costigan, 2016; Prencipe, Markarian, & Pozza, 2008; Shrieves & Gao, 2002; Shuto, 2007; Sun, 2012). Based on the compensation structure of Thai firm-listed in the Stock Exchange of Thailand (SET) most of the companies pay compensation by cash, this study defines executive compensation as the number of executive compensation from the annual registration report (56-1) by focusing on two parts that are the short-term and post-employment benefit.

In addition, the prior research reveals the effect of corporate governance mechanisms can reduce the level of discretionary earnings management, this study attempts to deeper investigate the influence of managerial power (shareholding and dual position) on the relationship between executive compensation and earnings management by generating the interactive variables to test the hypotheses as follows:

(1) Short-term benefit (SHORT) is the total benefit for the top management team, which is expected to be paid in full before 12 months after the date of the annual report period.
(2) Post-employment benefit (POST) is the total benefits for the top management team that paid after employment ends, which is not a benefit when terminating employment and short-term employee benefits.
(3) Short-term benefit with Shareholding (SHORT*SHARE) is the number of short-term benefits × the percentage of shares that holding by executive
(4) Short-term benefit with Dual position (SHORT*DUAL) is the number of short-term benefits × the dummy variables of firms with/without executives holding dual positions in the company.
(5) Post-employment benefit with Shareholding (POST*SHARE) is the number of post-employment benefits × the percentage of shares that holding by executives.
(6) The post-employment benefit with Dual position (POST*DUAL) is the number of post-employment benefits × the dummy variables of firms with/without executives holding dual positions in the company.

3.1.3 Control Variables

(1) Shareholding (SHARE) is measured as the percentage of shares that holds by the top management team.
(2) Dual position (DUAL) is measured as firms that have executives holding dual positions in the company. (1 = firm with CEO holding Chairman position, 0 = does not)
(3) Firm size (SIZE) is the natural log of total assets.
(4) GROWTH (GROWTH) is measured as the percentage increase in sales.
(5) Return on assets (ROA) is included in the regression models to control for the measurement error related to firm performance. ROA is calculated as income before extraordinary items divided by lagged total assets. SIZE, GROWTH, and ROA are used in many prior studies (Gunny, 2010; Leuz, Nanda, & Wysocki, 2003; Santoso & Fu, 2014; Wang, 2015; Xiong, 2016; A. Y. Zang, 2012).
(6) Leverage ratio (LEV) is also found to be associated with firms' earnings management choices (Santoso & Fu, 2014; Wang, 2015; Xiong, 2016), it is calculated as total liabilities divided by total assets.

3.2 Developing Regression Models

To test hypotheses, this study develops the model to investigate the association between executive compensation, managerial power, and earnings management (EM), by measuring earnings management on both Accrual-based earnings management (AEM) and Real activities earnings management (REM), the regression models represent as follow:

$$\begin{aligned} EM_{i,t} = {} & \beta_0 + \beta_1 SHORT_{i,t} + \beta_2 POST_{i,t} + \beta_3 SHORT_{i,t} * SHARE_{i,t} + \beta_4 SHORT_{i,t} * DUAL_{i,t} \\ & + \beta_5 POST_{i,t} * SHARE_{i,t} + \beta_6 POST_{i,t} * DUAL_{i,t} + \beta_7 SHARE_{i,t} + \beta_8 DUAL_{i,t} + \beta_9 SIZE_{i,t} \\ & + \beta_{10} GROWTH_{i,t} + \beta_{11} LEV_{i,t} + \beta_{12} ROA_{i,t} + \varepsilon_{i,t} \end{aligned} \quad (7)$$

Where $EM_{i,t}$ represents two approaches of earnings management including $AEM_{i,t}$ is the lagged value of absolute discretionary accruals of firm i in the year t and $REM_{i,t}$ is the sum of abnormal cash flow, abnormal discretionary expense and abnormal of firm i in year t. $SHORT_{i,t}$ is the total benefits for the top management team of firm i in year t that is disclosed in the annual registration statement (Form 56-1). $SHORT_{i,t} * SHARE_{i,t}$ is the number of short-term benefits × the percentage of shares that holding by the executive, $SHORT_{i,t} * DUAL_{i,t}$ is the number of short-term benefit × the dummy variables of firms with/without executive holding dual positions. In the group of post-employment including $POST_{i,t}$ is the total benefits for the top management team that is paid after employment ends of firm i in year t that is disclosed in the annual registration statement (Form 56-1). $POST_{i,t} * SHARE_{i,t}$ is the number post-employment benefit × the percentage of shares that holding by executives, $POST_{i,t} * DUAL_{i,t}$ is the number of post-employment benefits × the dummy variables of firms with/without executives holding dual positions. Among of control variables are SHARE, DUAL, SIZE, GROWTH, LEV, and ROA.

4. Result

4.1 Descriptive Statistics

Table 2 shows descriptive data for executive compensation, showing that the average total compensation of executives is 50.37 million baht, with the highest and lowest total compensation at 464.82 and 2.17 million baht, respectively. By way of comparison for compensation payments, Thailand has higher compensation based on short-term benefits, with a maximum of 461.85 million baht in year 2015, while the maximum of post-employment is 50.80 million baht which is a small proportion compared to short-term benefits. However, the results show that the number of post-employment benefits of the executive is likely to have increased during the past five years.

Table 2 Executive Compensation (Million Baht)

Panel A Short-Term Employee Benefit	2013	2014	2015	2016	2017	Total
Min	2.09	.46	0.28	4.32	3.10	0.28
Mean	44.62	46.13	48.58	49.38	49.38	47.68
Max	382	447	461.85	430	441	461.85
S.D	47.37	51.98	54.44	54.85	54.04	52.67
N	261	282	283	292	290	1,408
Panel B Post-Employment Benefit	**2013**	**2014**	**2015**	**2016**	**2017**	**Total**
Min	0.01	0.01	0.001	0.002	0.003	.001
Mean	2.02	2.03	2.14	2.21	2.34	2.15
Max	21.72	26	22.68	32.70	50.80	50.80
S.D	2.86	2.80	3.07	3.53	4.82	3.51
N	261	282	283	292	290	1,408
Panel C Total Executive Compensation	**2013**	**2014**	**2015**	**2016**	**2017**	**Total**
Min	2.17	2.67	3.48	4.38	3.119	2.17
Mean	47.08	48.64	50.98	52.25	59.79	50.37
Max	400	449.78	464.82	438	449	464.82
S.D	49.15	53.73	56.44	56.96	135.53	54.72
N	261	282	283	292	290	1,408

Table 3 reveals the percentage of executives holding a dual position; panel A shows the highest percentage in year 2013 and 2014 at 94.97%, when simultaneously the mean of shareholding was about 12–13%. Based on the data, companies are highly different in the structure of executive shareholding. Panel B displays the proportion of firms with and without the dual position of executive. The dual position is increased continuously, in comparison, the proportion of dual position is at a high level as about 66% each year.

Table 3 Information on Executive Shareholding (Percentage) and Dual Position

Panel A Shareholding	2013	2014	2015	2016	2017	Total
Min	0	0	0	0	0	0
Mean	12.45	12.68	11.85	11.82	11.75	12.10
Max	94.97	94.97	74.59	74.59	81.15	94.97
S.D	17.81	17.89	16.74	16.64	16.87	17.16
N	261	282	283	292	290	1,408
Panel B Dual position	**2013**	**2014**	**2015**	**2016**	**2017**	**Total**
Dual position	173	182	184	194	195	928
Non-dual position	88	100	99	98	95	480
N	261	282	283	292	290	1,408

4.2 Correlation Matrix

Table 4 reveals the Pearson correlation between the variables of compensation, managerial power, and earnings management. The results of the correlation matrix show that short-term benefits, the interaction value of short-term benefits and executive shareholding (Short*Share), the interaction value of short-term benefits and dual position (Short*DUAL) are positively correlated with discretionary accruals at 0.05 levels (0.057, 0.087, and 0.061respectively) The variables of short-term benefits, post-employment benefits, and the correlation of compensation and managerial power have no correlation with REM. However, the result reveals managerial power as the percentage of share held by executives and dual position is positively related to the level of executive benefit both with short-term and post-employment benefits.

Table 4 Correlation Matrix

	ABS_DACC	AB_CFO	AB_DISEX	AB_PROD	REM	Short	Post	Short*share	Short*dual	Post*share	Post*dual	Share	Dual	SIZE	GROWTH	LEV
ABS_DACC	1															
AB_CFO	0.699**	1														
AB_DISEX	0.021	0.073**	1													
AB_PROD	0.198**	0.296**	0.488**	1												
REM	−0.369**	−0.542**	−0.177**	0.467**	1											
Short	0.057*	−0.016	−0.012	−0.03	−0.010	1										
Post	0.01	0.013	0.058*	0.046	0.000	0.405**	1									
short*share	0.087*	−0.008	−0.078**	−0.063*	−0.01	0.319**	0.086**	1								
short*dual	0.061*	0.013	0.017	0.009	−0.012	0.847**	0.277**	0.312**	1							
post*share	0.018	−0.031	0.001	−0.006	0.018	0.102**	0.462**	0.553**	0.071**	1						
post*dual	0.011	0.025	0.079**	0.064**	−0.003	0.435**	0.63**	0.113**	0.562**	0.137**	1					
Share	0.045	−0.007	−0.065*	−0.027	0.018	−0.098**	−0.085**	0.65**	−0.041	0.446**	−0.061*	1				
Dual	0.014	0.001	0.105**	0.076**	0.011	0.123**	−0.018	0.13**	0.467**	0.009	0.382**	0.067*	1			
SIZE	0.142**	0.059*	0.146**	0.090*	−0.045	0.684**	0.380**	0.141**	0.587**	0.043	0.425**	−0.164**	0.166**	1		
GROWTH	0.026	−0.139**	0.015	0.282**	0.382**	−0.025	0.001	−0.017	−0.014	−0.013	0.014	−0.002	0.031	0.02	1	
LEV	−0.005	0.037	0.031	0.04	−0.004	0.03	0.009	−0.010	0.016	−0.011	0.014	−0.027	−0.011	−0.042	0.006	1
ROA	0.342**	−0.211**	−0.039	−0.194**	−0.003	0.095**	0.026	0.083**	0.061*	0.057*	0.018	0.024	−0.015	0.05	0.007	0.291**

** < 0.01 correlation is significant at 0.01 level

* < 0.05 correlation is significant at 0.05 level

4.3 The Regression Results

This study tests the hypotheses by running a multiple regression with the dependent variables for earnings management in two approaches, AEM and REM. The independent variables include short-term benefits, post-employment benefits, and managerial power (shareholding and dual position). Among the control variables are SIZE, GROWTH, LEVERAGE, and ROA.

4.3.1 The Association between Executive Compensation and Earnings Management.

Executive compensation in Thailand is divided into two categories, short-term and post-employment benefits. The results shown in Table 5 reveal a negative association between short-term benefits and AEM, as the coefficient is –0.0009 ($p < 0.01$), while there is a positive association with REM, as the coefficient is 0.0006 ($p < 0.10$). Regarding post-employment benefits, there is a positive association between post-employment benefits and AEM, as the coefficient is 0.0037 ($p < 0.10$). While, regarding the REM components, the results show a positive association between post-employment benefits and abnormal cash flow operation (AB_CFO), as the coefficient 0.0041 ($p < 0.10$), in contrast, there is a negative association between post-employment benefits and abnormal discretionary expense (AB_DISEX), as the coefficient –0.0019 ($p < 0.10$). The result is consistent with the literature, which also found a negative association between executive compensation and discretionary accruals earnings management (Limsuthiwanpum and Chaimankong, 2015; Shrieves and Gao, 2002).

4.3.2 The Influence of Managerial Power on the Relationship between Executive Compensation and Earnings Management.

Table 5 presents the result of AEM, where the value of the interaction term between short-term benefits and executive shareholding (short*share) has a positive association with AEM, however, considering the coefficient value (0.000), executive shareholding hardly influences the relationship between short-term benefits and AEM. In the post-employment benefits part, the results show that there is a positive association between post-employment benefits and AEM, but no significant influence on REM. Moreover, the results reveal that executive shareholding and the dual position of executive can reduce the relationship between post-employment benefits and AEM, as the coefficients are –0.0002 and –0.0060, respectively.

In regard to REM, the result shows that executive shareholding reduced the relationship between short-term benefits and REM, with the coefficient of –0.0000 ($p < 0.10$), while there is no significant influence of dual position. The results based on REM components reveal that executive shareholding has significantly decreased the relationship between short-term benefits and AB_DISEX, and AB_PROD, while the dual position of executive influences short-term benefits to be positively associated with AB_CFO. In apart of post-employment benefits, the results show that both shareholding and dual

position are no significant influence on the association between post-employment benefits and REM. However, the results show that executive shareholding influences the relationship between post-employment benefits and AB_CFO, as the coefficient of –0.0002 ($p < 0.10$), and on the relationship with AB_DISEX, at 0.0001 ($p < 0.10$). While, the dual position of executive influences the relationship between post-employment benefits and AB_CFO, significantly, as the coefficient at –0.0046 ($p < 0.10$).

Table 5 Regression of Executive Compensation, Managerial Power, and Earnings Management

Variables	ABS_DACC	AB_CFO	AB_DISEX	AB_PROD	REM
Constant	–0.2119***	–0.1247***	–0.1398***	–0.2250***	0.0931*
	(–4.69)	(–2.93)	(–4.10)	(–4.13)	(1.86)
Short	–0.0009***	–0.0011***	–0.0001	–0.0007*	0.0006*
	(–3.21)	(–3.68)	(0.31)	(–1.84)	(1.82)
Post	0.0037*	0.0041*	–0.0019*	0.0006	–0.002
	(1.66)	(1.87)	(–1.83)	(0.24)	(–0.73)
Short*share	0.0000*	0.0000	–0.0000***	–0.0000**	–0.0000*
	(1.74)	(1.44)	(–2.94)	(–2.04)	(–1.64)
Short*dual	0.0006**	0.0008***	–0.0000	0.0003	–0.0004
	(2.07)	(2.61)	(–0.14)	(0.70)	(–1.11)
Post*share	–0.0002*	–0.0002*	0.0001*	0.0001	0.0002
	(–1.89)	(–1.84)	(1.85)	(0.89)	(1.36)
Post*dual	–0.0060**	–0.0046*	–0.0001	–0.0017	0.0028
	(–2.02)	(–1.59)	(–0.10)	(–0.53)	(0.79)
Share	0.0003	0.0001	0.0003	0.0004	0.0003
	(0.71)	(0.16)	(1.03)	(0.81)	(0.56)
Dual	–0.0152	–0.0258	0.0188	0.0163	0.0161
	(–0.90)	(–1.55)	(1.25)	(0.74)	(0.82)
SIZE	0.0250***	0.0197***	0.0157***	0.0288***	0.0137**
	(4.63)	(3.70)	(3.81)	(4.22)	(–2.17)
GROWTH	0.0000	–0.0000***	1.16e–0	0.0000***	0.0000***
	(0.85)	(–5.54)	(1.38)	(12.39)	(15.29)
LEV	–0.0094***	0.0082***	0.0016	0.0094***	0.0007
	(–4.02)	(3.57)	(1.51)	(3.81)	(–0.25)
ROA	0.5041***	–0.1869***	–0.0156	–0.2045***	–0.0231
	(14.81)	(–5.61)	(–1.01)	(–5.60)	(–0.56)

Table 5 Regression of Executive Compensation, Managerial Power, and Earnings Management (Cont.)

Variables	ABS_DACC	AB_CFO	AB_DISEX	AB_PROD	REM
N	1408	1408	1408	1408	1408
R-square	0.1549	0.1819	0.0580	0.1909	0.2922
Prob > Chi2	0.0000	0.0000	0.0000	0.0000	0.0000

***, **, * Coefficient is significant at the 0.01, 0.05, 0.1 level respectively

For the relationship between the control variables of managerial power and earnings management, the results reveal that there has been no significant influence of both variables of shareholding and dual position on earnings management. For other control variables, such as size of firm (SIZE) and the return on assets (ROA), have a positive association with AEM, while the leverage of the firm (LEV) is negatively related. In apart of REM, the results show that size and growth rate of firms are positively related with REM.

4.3.3 Addition Analysis

The Regression Result Based on Family and Non-Family Firms

Table 6 presents the association between executive compensation and earnings management, which includes the influence of managerial power. Following Jiraporn and DaDalt (2009) this study defines family firms as firms with a family member serving on the board of directors as the position of chairman, chief executive officer, managing director, or chief financial officer.

The results for family firms reveal a negative influence of short-term benefits and post-employment on AEM, with coefficients of –0.0005 ($P < 0.1$) and –0.004 ($P < 0.1$), whereas they are no significantly related with REM. Moreover, the results show a significant influence of managerial power on the association between executive compensation and earnings management, Short*share is positively related with AEM (coefficient at 0.0015, $p > 0.1$), while no significant related with REM. While, Post*share is negatively related with AEM (coefficient at –0.0007, $p > 0.05$), and has no significant related with REM. For the influence of dual position, the results found that Short*dual and Post*dual have no significant related with both AEM and REM. In terms of control variables, the findings reveal that SHARE has a negative influence on AEM, as the coefficient is –0.0044 ($P < 0.05$). For the other variables, we found that SIZE, LEV, and ROA are positively related with AEM but SIZE is negatively related with REM, while, GROWTH is negatively related with REM.

In terms of the non-family firm, the results reveal a negative influence of short-term benefits on AEM, with a coefficient of –0.0005 ($P < 0.05$), whereas it is not related with REM. While for the Post-employment benefits, the results reveal that there is no significant influence on either AEM or REM. Regarding the influence of managerial power, the results reveal that Short*dual has a negative influence on REM, as the coefficient is –0.0347 ($P < 0.10$). For other control variables, the results reveal that there is a positive relationship between dual position and REM, as the coefficient is –0.121 ($P < 0.10$), while SIZE and GROWTH are not significantly related with both AEM and REM, LEV is negatively related with AEM, and ROA is positively related with AEM but negatively related with REM.

Table 6 Regression of Executive Compensation, Managerial Power, and Earnings Management Based on Family and Non-Family Firm Observations

	Family firms		Non–family firms	
Variables	**ABS_DACC**	**REM**	**ABS_DACC**	**REM**
Constant	–0.378***	0.155**	–0.0907	0.0335
	(–5.52)	(2.45)	(–1.61)	(0.56)
Short	–0.0005*	0.0002	–0.0005**	0.0004
	(–1.91)	(1.05)	(–2.14)	(1.51)
Post	–0.004*	0.0035	0.0022	–0.0012
	(–1.68)	(1.37)	(1.13)	(–0.65)
Short*share	0.0015***	–0.0007	–0.0009	0.0005
	(3.35)	(–1.59)	(–1.33)	(0.74)
Short*dual	–0.0193	0.0207	0.0313	–0.0347*
	(–1.08)	(1.20)	(1.63)	(–1.75)
Post*share	–0.0007**	0.0002	–0.0003	0.0001
	(–2.53)	(0.82)	(–1.28)	(0.50)
Post*dual	0.0088	–0.0057	–0.0133	0.0154
	(1.25)	(–0.77)	(–1.21)	(1.41)
Share	–0.0044**	0.0021	0.0037	–0.0017
	(–2.82)	(1.35)	(1.57)	(–0.68)
Dual	0.0333	–0.0649	–0.0939	0.121*
	(0.52)	(–1.07)	(–1.44)	(1.80)
SIZE	0.0451***	–0.0227***	0.0078	–0.0045
	(5.39)	(–2.91)	(1.10)	(–0.60)

Table 6 Regression of Executive Compensation, Managerial Power, and Earnings Management Based on Family and Non-Family Firm Observations (Cont.)

Variables	Family firms		Non–family firms	
	ABS_DACC	REM	ABS_DACC	REM
GROWTH	4.60e–06	0.0001***	5.43e–07	7.36e–07
	(1.46)	(32.19)	(0.20)	(0.30)
LEV	0.0454*	0.0138	–0.0124***	0.0023
	(1.68)	(0.50)	(–4.37)	(0.87)
ROA	0.490***	0.0055	0.562***	–0.127**
	(11.84)	(0.12)	(9.74)	(–2.27)
N	698	698	710	710
R-square	0.2474	0.6248	0.1287	0.0202
Prob > Chi2	0.0000	0.0000	0.0000	0.0000

***, **, * Coefficient is significant at the 0.01, 0.05, 0.1 level respectively

5. Conclusion

This study aims to investigate the association between executives, compensation and earnings management, and expanded the scope to the impact of managerial power. The study examines short-term and post-employment benefits of the executive, as disclosed in the annual registration report (56-1), and measured earnings management under the discretionary accruals and real activities earnings management approach.

The findings are consistent with Shrieves and Gao (2002) and Limsuthiwanpum and Chaimankong (2015), showing a negative association between short-term benefits and accruals earnings management (AEM); in contrast, there is a positive association with real activities earnings management (REM). The result implies that executives might use REM to increase their short-term benefits, which supports a previous study revealing that after the passage of SOX in 2002, executives tend to manage earnings through operation activities (Cohen et al., 2008). When receiving higher short-term benefits, executives have reduced earnings management through accruals in order to avoid being audited and preserve their reputation. Meanwhile, REM is another approach that they can apply to manipulate earnings and it is difficult to detect, although receiving higher short-term benefits, they still have an incentive and opportunities to manage earnings. In other words, executives can manage earnings through real activities operation to gain their short-term benefits. Regarding post-employment benefits, there is a positive influence of post-employment benefits on AEM, while no significant influence on REM.

While, for the post-employment benefits found that managers might have an incentive to manage earnings through AEM that consistent with the previous studies that reveal firms with CEOs are nearing retirement age have large discretionary accruals in the year prior to turnover (Davidson et al., 2007; Mather & Ramsay, 2006). Nearing retirement CEO may prioritize post-employment benefits over their reputation, and they can take more risk of being detected because they may not have much impact on their career.

This study examined additional factors which might influence the determination of executives' compensation and earnings management behavior, which is managerial power. The result provides evidence that executive shareholding and dual position moderated the relationship between executives' compensation and AEM, firms with high proportion of executives' shareholding might have high level of AEM Other than that, from holding dual position they may have more power to create discretionary expenses or change accounting policies at year end. In contrast, when considering the combination of executives' shareholding, dual position and post-employment benefits, the result found that there was a decrease on executives' incentives to manage earnings through AEM. Additionally, executive shareholding have significantly reduced the relationship between short-term benefits and REM. Although the executive has high managerial power, this does not lead to an increased incentive to manage earnings through operational activities. This is consistent with the literature, which revealed that managerial ownership and dual position do not lead to increased earnings management incentives (Ali et al., 2008; Alves, 2012; Aupipat, 2016). From the results of this study, besides being beneficial to the company in consideration of short-term and post-employment benefits, this can also consider corporate governance mechanisms to reduce the level of earnings management. Executives' shareholding and dual position can have both positive and negative influences on earnings management incentives, which depends on types and level of executives' compensation at that time.

Supporting these results, based on family structure, family firms can decrease AEM by considering increase short-term and post-employment benefits, while non-family firms can decrease AEM by increasing short-term. We can interpret that firms with high numbers and compensation of executives have a low level of discretionary accruals earnings management. In addition, in family firms, the findings reveal that executive shareholding moderated the relationship between executives' compensation and AEM, firms with high proportion of executives' shareholding might have high level of AEM caused by executives are motivated to manage earnings for short-term benefits such as salary, bonuses. While, when considering the combination of post-employment benefits and proportion of executives' shareholding, the result found that there was a decreasing on executives' incentives to manage earnings through AEM, in contrast, there is no significant influence of executives' shareholding in non-family

firms. For the dual position of non-family firms, executives who hold dual position might have lower incentive to manage earnings through real activities manipulation to receive their short-term benefits. Thus, the total short-term benefits gained from holding dual position and the desire to maintain their reputation lead to a decreasing earnings management incentive.

This study showed that executives' compensation influenced the incentive to manage earnings, which supports agency theory regarding conflict of interest. The executive has the incentive to manage earnings not only for the benefit of the business but also to receive benefits of their own. However, if the business is in compliance with good corporate governance principles, this can be an instrument to control or reduce earnings management behavior and also increase the transparency and credibility of the company. However, the application of corporate governance mechanisms requires consideration of the company's structure to be able to apply the mechanism properly.

6. Limitations and Suggestions for Future Studies

However, limitations are mentioned in this study. Although the results of the study are useful for shareholders to consider the number and compensation factors of executives in order to mitigate the incentives for managing profits of executives. The study focuses on listed companies on the capital markets of Thailand during 2013–2017, which is an old data. Therefore, it may not clearly reflect current circumstances. Another limitation, executives 'compensation and managerial power was used in this study, there are other factors of corporate governance mechanism that probably influence earnings management level. Therefore, to close the limitations of this study, the suggestions for future study are to investigate earnings management of listed companies in the other ASEAN member countries in recent years by using corporate governance mechanism, rules, float, and other factors that probably influence earnings management.

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