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Top Management Characteristics and Earnings Management Strategies: Evidence from Indonesia

Poppy Nurmayanti[1*], Novita Indrawati[2], Emrinaldi Nur DP[3]
[1.2.3]*Riau University, Pekanbaru, Indonesia*
*Corresponding author: poppy.nurmayanti@lecturer.unri.ac.id
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ABSTRACT

This study examines whether the strategic choice of earnings management chosen by top management (such as CEO and CEO and a team separately) is related to characteristics of top management (i.e., genders, age, tenure, financial expertise, business experience, and education). This study employs regression analyses to analyse 707 firm-year observations of manufacturing companies listed in the Indonesian Stock Exchange (IDX) between 2010 and 2018. This study found that top management team tended to choose the strategic choice of real-based earnings management. Meanwhile, top management individually, both CEO and CFO tend to choose accrual earnings management strategies over real activity-based earnings management. These results are inline with upper echelon theory and financial report preparation and mechanism in companies, especially in selecting and appointing top-level executive.

Karakteristik Manajemen Puncak dan Strategi Manajemen Laba: Bukti Dari Indonesia

ABSTRAK

Studi ini menguji apakah pilihan strategis manajemen laba yang dipilih oleh manajemen puncak (seperti CEO dan CEO dan tim secara terpisah) terkait dengan karakteristik manajemen puncak (yaitu, jenis kelamin, usia, masa kerja, keahlian keuangan, pengalaman bisnis, dan pendidikan). Penelitian ini menggunakan analisis regresi untuk menganalisi data dari 707 perusahaan-tahun observasi dari perusahaan manufaktur yang terdaftar di Bursa Efek Indonesia (BEI) dari 2010-2018. Hasil penelitian ini menemukan bahwa tim manajemen puncak cenderung memilih pilihan strategis manajemen laba berbasis riil. Sementara itu, manajemen puncak secara individu, baik CEO maupun CFO cenderung memilih strategi manajemen laba akrual daripada manajemen laba berbasis aktivitas nyata. Hasil ini mendukung teori eselon atas dan memiliki implikasi bagi pemangku kepentingan dalam pelaporan keuangan, terutama untuk memilih dan menunjuk eksekutif tingkat atas.

1. Introduction

Top management plays a role and is responsible for determining strategic choices and appropriate organizational performance in the face of various pressures and threats at every stage of growth and development (Zahra & Pearce, 1989). Cheng & Kin (2006) explained that the CEO is someone who has the greatest power in making decisions. This decision related to organizational strategy and performance. The CEO is responsible for the company's performance, so it is possible that the CEO can influence the financial statements as a presentation of the company's financial performance, financial position, and cash flow. Ge et al. (2011) stated that financial executives are direct influencers of the top management team in making accounting decisions. Top management personality factors such as CEO and CFO

characteristics as part of individual behaviour are expected to influence the mind-set and perspective of individuals (Hambrick & Mason, 1984; Bouaziz et al., 2020). Upper echelon theory states that organizational outcomes (strategic choices and performance levels) are partially predicted from managerial background (Hambrick & Mason, 1984).

Given the difficulty of obtaining psychometric data from top management team members, Hambrick & Mason (1984) argue that when predicting top management team strategic actions, researchers can validly use top management team member characteristics as a proxy for cognitive differences. Top management characteristics include age, gender, experience, and education.

Earning is one of the organizational outcomes. Earnings quality is earnings that have small variance with cash flows that have consequences for making adequate decisions (not misleading). The flexibility of accounting standards allows top management to use their judgment to select policies and estimate accounting numbers that differ from the company's economic conditions (Arun et al., 2015). Managers have an incentive to maximize firm value and to gain personal gain at the expense of shareholder interests (Christie & Zimmerman, 1994; Ghardallou et al., 2020). Managers have discretion over accounting earnings to mislead shareholders about the company's financial performance or to obtain personal benefits at the expense of stakeholder interests (opportunistic earnings management) (Healy & Wahlen, 1999). Earnings management reduces the quality of financial reporting because the information presented in the financial statements does not reflect the true economic condition of the company.

The choice of financial reporting differs from corporate decisions. The choice of financial reporting has various constraints, such as the presentation of financial statements based on generally accepted accounting principles, capital market regulations, and independent auditors (Ge et al., 2011; Qi et al., 2018). Previous research has tended to focus more on corporate decisions (Datta & Rajagopalan, 1998; Jensen & Zajac, 2004; Miglani, 2014) than decisions on financial reporting choices (Bamber et al., 2010; Ghardallou et al., 2020).

Research in the behavioural area provides evidence that executive personality factors such as experience, values, and personality are important factors that can affect the quality of financial reporting (Custódio & Metzger, 2014; Hambrick & Mason 1984; Nguyen et al., 2018; Bouaziz et al., 2020; Ghardallou et al., 2020). A number of studies in the area of earnings management have examined the factors that influence accounting choice, both from the firm level (Klein, 2002), market level (Leuz et al., 2003), as well as from a specific level of manager (Ali & Zhang, 2015; Baatwah et al., 2015; Demerjian et al., 2013; Francis et al., 2008; Arun et al., 2015; Ge et al., 2011; Nguyen et al., 2018).

This empirical evidence shows that research that focuses on specific characteristics of managers is still limited to one executive, namely only using one of the characteristics of top management (CEO or CFO) as the focus of research (Ali & Zhang, 2015; Arun et al., 2015; Francis et al., 2008; Ghardallou et al., 2020; Bouaziz et al., 2020). However, previous research rarely considers the characteristics of individual top management (CEO and CFO) and top management collective (Qi et al., 2018; Zwageri et al., 2020).

This study is built with the current upper echelon perspective, taking into account the top management team both as individuals (CEO and CFO) and as a team of Indonesian manufacturing companies. Hambrick (2007) has updated the upper echelon theory by emphasizing the collective characteristics of top management as a team rather than the individual characteristics of top management. This study follows Hambrick (2007) which suggests that research in the upper echelon area is also important in countries of different complexity than the United States. Indonesia has a different background from the United States in

terms of culture, socio-economic system, share ownership structure, governance structure, and others. The different socioeconomic context in each country motivates researchers to investigate the influence of top management characteristics on earnings management of Indonesian manufacturing companies.

Furthermore, Hambrick (2007) states that a complex organization includes joint activities, cognition, abilities, and collective interaction of the entire management team into strategic behaviour. (Qi et al., 2018) argue that organizational strategy (and outcomes) depends on, the composition and characteristics of the top management team. Managerial responsibility, including financial accounting, is rarely the exclusive domain of an individual. Hambrick (2007) argues that focusing on the collective characteristics of the top management team will provide a more powerful explanation for organizational outcomes than focusing solely on individual top management (CEO or CFO).

This study uses 707 firm-year observations from manufacturing companies listed on the Indonesia Stock Exchange (IDX) from 2010 to 2018. Top management team profile data (CEO, CFO and top management team) are hand-collected from annual reports accessed through www.idx.co.id. If the top executive profile data is not available in the annual report, the authors trace them to the website of the company concerned. Financial data to estimate accrual quality, real activity-based earnings management, and control variables are obtained from the Bloomberg database and financial reports are accessed through www.idx.co.id.

Overall, this study finds that in general the top management team is more likely to choose the strategic choice of real-activities-based earnings management compared to accrual-based. The real-activities-based earnings management strategy chosen is to manipulate operating cash flows and production costs. However, specifically top executives, both CEO and CFO, are more likely to choose strategic accrual-based earnings management than real-activities-based earnings management. The real-activities-based earnings management strategy chosen is to manipulate operating cash flows and production costs. However, specifically top executives, both CEO and CFO, are more likely to choose strategic accrual-based earnings management than real-activities-based earnings management.

The sensitivity analysis by aggregating all the characteristics of top management (gender, age, tenure, education level, business skills and finance) show results consistent with the main test. Top management tends to choose accrual-based earnings management as their preferred earnings management strategy compared to real-activities-based earnings management. Meanwhile, the sensitivity analysis also shows that mature companies tend to lack real-activities-based earnings management by manipulating operating cash flows and production costs. In other words, mature companies tend to report better earnings quality.

This study contributes to the literature on by presenting empirical evidence as to what factors explain the choice of earnings management strategies between accrual-based earnings management and real-activities-based earnings management. Practical contributions are intended for regulators and companies to make regulations regarding the specific requirements that top management must have. These specific requirements include requirements on financial and business skills that top management teams must possess, limiting CEOs/CFOs tenure, age, and CEOs/CFOs specific education. These regulations are expected to improve the quality of financial information and good corporate governance implementation.

The remainder of the paper is organized as follows. Section 2 discusses the literature review and develops our hypotheses, section 3 describes the research methods, section 4 presents discussions and analyses, and section 5 explains

conclusion and limitations of the study and future research.

2. Theoretical framework and hypothesis development

Globalization and business which is increasingly complex and growing requires the skills and skills top management to be higher. Determining the right characteristics of top management and in accordance with the company's dynamic business environment affects the quality of accounting information (Simerly, 2015; Cui et al., 2021).

Over the past three decades, studies investigating the role of top executives as key decision makers in business organizations built from an upper echelon perspective have increased. Upper echelon theory predicts that organizational outcomes (strategic choices and performance levels) are partially predicted from managerial background characteristics (Hambrick & Mason, 1984). The essence of upper echelon theory is that top management act on their interpretation of the situations they face.

Top management is responsible for the organization as a whole so that their characteristics, what they do, and how they do it specifically affect organizational outcomes. The organizational outcome that is the focus of this study is the strategic choice made by the CEO, namely the accounting choice (earnings management). Accounting choices must comply with various constraints such as generally accepted accounting principles, independent auditing, and market regulations (Ge et al., 2011). The accounting choices taken by the CEO are expected to report quality earnings.

However, reporting quality earnings cannot be separated from the CEO's intervention and discretion. Earnings management can occur when managers use judgment in financial reporting, or structure company transactions in such a way as to mislead the company's performance or to influence the outcome of contracts that depend on accounting numbers (Healy & Wahlen, 1999). Healy & Wahlen (1999) explain that earnings management is a choice of accounting policies made by managers with specific objectives. This can happen when management has access to information that is not accessible to outsiders. High earnings management (low) indicates the quality of reported earnings is low (high). Earnings management strategy can be done through discretionary accruals or manipulating real transactions. These two types of earnings management (accrual earnings management and earnings management from real activities) both involve managers' efforts to increase (decrease) earnings (Gunny, 2010).

Upper echelon theory as the basis for a research framework of top management characteristics related to accounting outcomes (accounting choices). Top management characteristics are observable indicators of an individual's experience, values, and personality (Hambrick, 2007). The focus of this study is to investigate the relationship between the characteristics of top management (both individually and in a top management) and the involvement of top management in carrying out accrual-based and real activity-based earnings management. Top management characteristics that are the focus of this study are gender and tenure (as personal characteristics) and attributes related to experience and expertise (work experience/tenure, education, financial expertise, and business experience).

Accounting studies that examine the relationship between the characteristics of top management and earnings management still tend to focus on individual CEOs or CFOs, and the results are mixed. Previous research investigating the effect of observable characteristic of top executives on financial accounting choices has mainly focused on gender, age, education, and experience (Barua et al. 2010; Liu et al., 2016; Peni & Vähämaa 2010; Bamber et al. 2010; Gounopoulos & Pham 2018; Qi et al. 2018; Graham et al. 2005; Hsieh et al., 2018).

Gender

The issue of gender diversity has also attracted the attention of studies in the area of finance and corporate governance in recent times. Several studies on gender have focused on the effect that female executives and directors have on a firm's financial performance, market value, and quality of accounting information (Peni & Vähämaa, 2010). Peni & Vähämaa (2010) found that female CFOs were more conservative in their financial reporting strategies compared to male CFOs. This finding is consistent with the corporate finance literature which states that executive gender differences influence managerial behaviour in terms of conservative, risk averse, and ethical behaviour.

Barua et al. (2010) and Qi et al. (2018) found that female CFOs tend to be less involved in earnings manipulation than male CFOs. It can be said that female CFOs report higher earnings quality than male CFOs. The author argues based on the findings above that gender differences in terms of risk tolerance, conservatism, and ethical behaviour. Thus, the first hypothesis is formulated as follows:

H_1a: Female top management has a negative relationship with accrual-based earnings management.

H_1b: Female top management has a negative relationship with real activity-based earnings management.

Age

Upper echelon theory states that the age of top executives can influence the values, cognitive styles, and decisions made by top managers (Hambrick et al., 1984). Naturally young people are more energetic, more willing to take risks, and learn faster. Qi et al. (2018) found that young top executives are cognitively better at making decisions than older top executives. This finding is in line with Gibbons & Murphy (1992) that managers who are approaching retirement (older age) are more risk averse than younger managers. Young managers are more focused on improving their careers so that young managers are more daring to take bigger risks.

Huang et al. (2012) show that the older a person is, the more conservative and ethical his/her behaviour becomes. Specifically, Huang et al. (2012) found that companies with older CEOs are less aggressive in earnings management, which is indicated by the low restatement of financial statements and the low achievement of profit targets based on analyst forecasts.

This finding is in line with (Santoso & Rakhman, 2013) who found that older CEOs reported lower discretionary accruals than younger CEOs. In other words, older CEOs report higher earnings quality than younger CEOs. Based on the explanation above, the second hypothesis is stated as follows.

H_2a: Older top management has a negative relationship with accrual-based earnings management.

H_2b: Older top management has a negative relationship with real activity-based earnings management.

Tenure

Upper echelon theory explains how CEO tenure influences strategic decisions made by CEOs (Hambrick & Mason, 1984). At the beginning of their tenure, CEOs tend to be risk averse and prefer low-risk strategies. At the beginning of the tenure, the CEO still has limited knowledge and power, if the CEO makes a risky strategy it will jeopardize their position as CEO (Hambrick and Fukutomi, 2015; Gibbons & Murphy, 1992; Xie, 2014). Ali & Zhang (2015) found that newly appointed CEOs tend to perform income-increasing earnings management. The new CEO is trying hard to convince market participants of his ability to improve the company's performance. CEOs do this to avoid market participants' perception that CEOs have low capabilities. New CEOs become more aggressive in manipulating earnings, this causes new CEOs to tend to report lower earnings quality than old CEOs (Ali & Zhang, 2015).

Ameila & Eriandani (2021) and Zhang (2009) also found that at the beginning of his tenure, CEOs have incentives to increase profits. CEO has a reputation for long tenure, CEO reports earnings less aggressively to protect his reputation. This means that CEOs with long tenures report higher earnings quality than CEOs with short tenures.

Based on the explanation above, the third hypothesis is stated as follows.

H_3a: Top management with longer tenure has a positive relationship with accrual-based earnings management.

H_3b: Top management with longer tenure has a positive relationship with real activity-based earnings management.

Financial skills and experience

Custódio & Metzger (2014) define CEO finance expertise as a CEO who has past experience in the financial industry or has had a financial role in non-financial companies. Past experience in the financial industry includes previous CEO work experience in banking companies or investment companies, while the CEO's previous finance roles include roles as accountants, finance executives or CFO, treasurer, or deputy finance director.

Matsunaga & Yeung (2011) investigated whether there are differences in the company's financial reporting and disclosure policies led by CEOs who had previous experience as CFOs. The results of the study found that companies led by CEOs who were former CFOs tended to carry out accrual earnings management by lowering earnings (income-decreasing). Analysis of earnings forecasts for companies led by CEOs who were former CFOs was found to be more accurate and precise than those of CEOs who were not experienced as CFOs. Matsunaga et al. (2013) found that CEOs who have been CFOs and received technical accounting and finance training have a better understanding of accounting and finance to communicate financial information to other parties.

Based on Custódio & Metzger (2014), this study uses two proxies of top management's financial expertise and experience, namely: (a) whether top management has previous experience as a CFO and (b) whether top management has previous experience as a public accountant. Given that earnings management behaviour is a common thing for top management (Graham et al. 2005; Roychowdhury, 2006), CFO with financial expertise is more likely to carry out earnings management, both accrual-based earnings management and real activity-based earnings management (Qi et al., 2018; Gounopoulos & Pham, 2018)

Based on the explanation above, the fourth hypothesis is formulated as follows.

H_4a: Top management with financial expertise and experience has a positive relationship with accrual-based earnings management.

H_4b: Top management with financial expertise and experience has a positive relationship with real-activity-based earnings management.

Education

Upper echelon theory also explains that top management education level is seen as an indicator of knowledge, cognitive orientation, and top management skill base (Hambrick & Mason, 1984). CEOs with higher education (especially CEOs with educational background in management and finance) are seen as most prepared to run a business and make the company grow ((Isidro & Gonçalves, 2011). A number of previous studies have investigated how a CEO's educational background influences his managerial behaviour in making decisions. For example, Wiersema & Bantel (1992) and Qi et al. (2018) provide evidence that CEOs with higher levels of education are better able to process information and accept significant changes within the company. Rajagopalan & Datta (1996) found that managers who have a high educational background provide high stock returns.

Because financial reporting requires a lot of consideration, the CEO plays an important role in shaping the attributes of accounting numbers in accordance with accounting standards. CEOs

whose have a high level of education tend to refuse requests from financial statement users or certain parties to carry out earnings management. Graham et al. (2005) found that CFOs with an MBA education background provide more sophisticated assessment techniques than CFOs without an MBA. CFO performs financial reporting that is more aggressive than real activities by performing earnings management to meet profit targets in order to avoid losses. Cheng & Kin (2006) provide evidence that boards of directors with a high level of education report better firm performance.

Qi et al. (2018) explained that the top management team and CEOs who are highly educated understand better how to do accrual-based earnings management compared to doing earnings management from real activities. In carrying out accrual earnings management, the top management team and CEO face various constraints such as the requirements of accounting standards, independent auditors, and regulations. These constraints make accrual earnings management more difficult than from real activities. The top management team and CEO require higher skills and proficiency to perform accrual earnings management.

Based on the explanation above, the fifth hypothesis is stated as follows.

H_5a: Top management with a higher level of education has a positive relationship with accrual-based earnings management.

H_5b: Top management with a lower level of education has a negative relationship with real activity-based earnings management.

3. Research method

Samples and data

This study uses 707 observations of manufacturing companies on Indonesia Stock Exchange (IDX) from year 2010-2018. Top management profile data (CEO and CFO) were collected by hand-collected from annual reports accessed through www.idx.co.id. If the top management profile data is not available in the annual report, the author traces it to the company's website. Financial data for estimating the quality of accruals, real activity-based earnings management, and control variables are obtained from the Bloomberg database and financial reports are accessed through www.idx.co.id. The following Table 1 presents the sample selection.

Table1. Sample selection protocol

Protocols		Number of Observation
Total manufacturing firms listed in IDX from 2010 – 2018		1.302
Less:	Delisting manufacturing firms from 2010-2018	18
	Manufacturing firms IPO from 2010-2018	39
	Missing CEO, CFO, and management team from 2010-2018	269
	Missing financial data from 2010-2018	213
Final sample (firm-year)		707

Accrual-based earnings management (AM)

This study uses a cross-sectional accrual model implemented by Ali & Zhang (2015). This model is an accrual model modified by McNichols (2002) by combining Jones (1991) model and Dechow & Dichev (2002). Consistent with previous studies, we use net income before extraordinary items minus operating cash flows to calculate total accruals. We estimate the total accrual model for the specific year and industry as follows:

$$\frac{ACC_{it}}{A_{it-1}} = \lambda_0 + \lambda_1 \frac{CFO_{it-1}}{A_{it-2}} + \lambda_2 \frac{CFO_{it}}{A_{it-1}} + \lambda_3 \frac{CFO_{it+1}}{A_{it}} + \lambda_4 \frac{\Delta REV_{it}}{A_{it}} + \lambda_5 \frac{PPE_{it}}{A_{it}} + \varepsilon_{i,t} \qquad (1)$$

ACC_{it} is the accrual of company i in year t, defined as net income before extraordinary items minus operating cash flows. A_{it-1} is the total assets of company i at the beginning of year t. CFO_{it} (CFO_{it-1}, CFO_{it+1}) is operating cash flow in year t (t-1, t+1). ΔREV_{it} is the change in income in year t. PPE_{it} is gross property, plant, and equipment at the beginning of year t and $\varepsilon_{i,t}$ is residual value. Following Ali & Zhang (2015) discretionary accruals are calculated from the residuals in equation (1). In this study, we use discretionary accruals as the first proxy for accrual-based earnings management.

Real activity-based earnings management (RM)

This study uses real activity-based earnings management proxy developed by Roychowdhury (2006). Roychowdhury (2006) defines RM as departing from the company's normal operating practices, motivated by management's desire to mislead stakeholders by convincing stakeholders that financial reporting objectives are in accordance with the company's normal operating practices. This study follows Roychowdhury (2006) by considering three real activity-based earnings management measures: abnormal levels of cash flow from operations, abnormal levels of production costs, and abnormal discretionary expenses.

The three components of RM are presented in the following equation.

1. Abnormal operating cash flow (OCF)

Abnormal operating cash flow (OCF) is estimated using equation (2) below.

$$\frac{CFO_{it}}{A_{it-1}} = \alpha_0 + \alpha_1 \frac{1}{A_{it-1}} + \alpha_2 \frac{S_{it}}{A_{it-1}} + \alpha_3 \frac{\Delta S_{it}}{A_{it-1}} + \varepsilon_{it} \qquad (2)$$

OCF_{it} is the current year's operating cash flow, A_{it-1} is the total assets in the previous year, S_{it} is the sales during the current year, ΔS_{it} is the difference between current sales and previous year's sales. Equation (2) will be estimated for each industry and every year. Abnormal operating cash flow is calculated as the difference between the actual value and the estimated rate of equation (2). The greater the value of abnormal operating cash flow indicates lower earnings management from real activities through sales manipulation.

2. Overproduction

Cost of goods sold (COGS) is estimated using equation (3) below.

$$\frac{COGS_{it}}{A_{it-1}} = \alpha_0 + \alpha_1 \frac{1}{A_{it-1}} + \alpha_2 \frac{S_{it}}{A_{it-1}} + \varepsilon_{it} \qquad (3)$$

Furthermore, to estimate inventory growth is presented in equation (4) below.

$$\frac{\Delta INV_{it}}{A_{it-1}} = \alpha_0 + \alpha_1 \frac{1}{A_{it-1}} + \alpha_2 \frac{\Delta S_{it}}{A_{it-1}} + \alpha_3 \frac{\Delta S_{it-1}}{A_{it-1}} + \varepsilon_{it} \qquad (4)$$

ΔINV_{it} is the change in inventory in the current period and the previous period. The production cost is determined by $Prod_{it} = COGS_{it} + \Delta INV_{it}$. By using equations (3) and (4), then the authors estimates the normal production costs as presented in equation (5) below.

$$\frac{PROD_{it}}{A_{it-1}} = \alpha_0 + \alpha_1 \frac{1}{A_{it-1}} + \alpha_2 \frac{S_{it}}{A_{it-1}} + \frac{\Delta S_{it}}{A_{it-1}} + \alpha_4 \frac{\Delta S_{it-1}}{A_{it-1}} + \varepsilon_{it} \qquad (5)$$

Equation (5) will be estimated for each industry and annually. In this study, the authors use abnormal PROD (RM_PROD) as a proxy for earnings management through overproduction.

The higher RM_PROD indicates real activity-based earnings management through high overproduction.

3. Abnormal discretionary expenditure

Equation (6) for estimating abnormal discretionary expenditure.

$$\frac{DISEXP_{it}}{A_{it-1}} = \alpha_0 + \alpha_1 \frac{1}{A_{it-1}} + \alpha_2 \frac{S_{it-1}}{A_{it-1}} + \varepsilon_{it} \quad (6)$$

DISEXPit is a discretionary expense, namely research and development expenses plus advertising, selling, administrative and general expenses. Equation (6) will be estimated for each industry and annually. In this study, the researcher uses abnormal discretionary spending (RM_DISEXP) as a proxy for earnings management from real activities through discretionary spending. A higher RM_DISEXP value indicates poor earnings management through discretionary spending. Next, we calculated abnormal OCF (RM_OCF), abnormal production cost (RM_PROD), and abnormal discretionary expense (RM_DISEXP) as the difference between the actual value and the predicted normal level by equations (2), (5), and (6). We use these three variables as a proxy for RM.

Top management characteristics

The top management team is defined as all managers at or above the vice president (Michel & Hambrick, 1992; Hambrick & D'Aveni, 1992; Hsieh et al., 2018) who are usually the equivalent of the top two layers of the organizational hierarchy. The top management includes the CEO, CFO, and all directors and corporate secretaries. We traced top management profiles containing information on gender, age, tenure, financial expertise, and education.

We used the proportion of female top management as a proxy for gender diversity (FEMALE). We used the proportion of senior management as a proxy for AGE. This proxy adopts Qi et al. (2018) The top management team is old when the top management team is above the median of all ages of the sample top management team. Top management team tenure is defined as how long the top management team has served in that top management position. The researcher uses the proportion of top management tenure as a proxy for TENURE (Nurmayanti & Rakhman, 2017). The top management is included in the top management with longer tenure if the top management team has tenure above the median value of all top management team tenures from this research sample.

Furthermore, we use the proportion of the top management team with financial and accounting work experience as the financial expertise of the top management team (FIN). For top management education, we used two proxies. First, we divide education into five levels, namely senior high school, diploma, undergraduate, master, and doctoral. The education level is given a number 1 if the top management has a high school education level and 2 if the top management has a diploma education level, and so on. We also used the average educational level of the top management as a proxy for education (EDU). This proxy adopts Qi et al. (2018). Second, the proportion of top management teams who have a business education background, management, and an MBA (BUSINESS) degree (Qi et al., 2018; Aier et al., 2005).

Control variable

The control variables are (1) firm size (SIZE), (2) return on assets (ROA), (3) operating cash flow volatility (OCFVOL), (4) leverage (LEV), and (5) LOSS indicate company's financial condition. We also includes year effect (YEAR) and (7) industry effect (INDUSTRY) to control for temporal variations and industry differences that are fixed effects.

Sensitivity analysis

Sensitivity analysis was carried out to confirm the robustness of the results by considering two

things. First, these top management characteristics are aggregated to obtain a composite score of individual characteristics (CEO and CFO) and top management team. Second, we consider the dynamic company's business environment by classifying the company into two groups, namely (a) mature company group and (b) growth company group. The determination of mature and growing companies is based on DeAngelo et al. (2006) that used the retained earnings to total assets ratio (RETA) to determine mature and growing companies. A high RETA implies that the company is more mature (mature stage) or older as indicated by a decrease in investment. Meanwhile, companies with low RETA tend to imply that companies are developing (growth stage) or younger as indicated by increased investment (DeAngelo et al., 2006).

4. Results and discussion

Descriptive statistic

Panels A, B, C Table 3 show descriptive statistics, respectively, of the characteristics of the CEO, CFO and top management. We winsorise the variable at the 1% levels to treat outliers. From 707 observations per company and per year, 12.73% of Indonesian manufacturing companies are led by female CEOs and 14.71% female CFOs. Meanwhile, from 1,815 observations per company and per year for the top management from Indonesian manufacturing companies, 22.15% are women. This indicates that it is difficult for women to be in top executive positions in Indonesian manufacturing companies. The age of the CEO, CFO, and top management is still dominated by the older CEO, CFO, and top management. The tenure of CEO, CFO, and top management tend to be short tenure (four years).

Furthermore, top executives who have experience and financial expertise in manufacturing companies are still low, namely 13.01% for CEOs, 18.53% for CFOs, and 10.19%. Top executives who are highly educated are well-educated, 42.43% for CEOs, 66.76% for CFOs, and 55.92%. This indicates that the majority of top executive members have a bachelor's degree. Top executives who have business skills are still low. This is shown by 13.30% CEOs who have business skills, 19.66% CFOs who have business skills, and 26.17% of top management team who have business skills. Panel D Table 3 dependent variables and control variables used in this study. The average of accrual- based earnings management (AM) is 0.0342. Real-based earnings management from abnormal cash flow (RM_CFO), abnormal production cost (RM_PROD), and abnormal discretionary expenditure (RM_DISEXP) are 0.1312, 0.2671, and 0.078, respectively.

Furthermore, top executives who have experience and financial expertise in manufacturing companies are still low, namely 13.01% for CEOs, 18.53% for CFOs, and 10.19%. Top executives who are highly educated are well-educated, 42.43% for CEOs, 66.76% for CFOs, and 55.92%. This finding indicates that the majority of top executive members have a bachelor's degree. Top executives who have business skills are still low. This is shown by 13.30% CEOs who have business skills, 19.66% CFOs who have business skills, and 26.17% of the top management team who have business skills. Panel D Table 2 dependent variables and control variables used in this study. The average value of accrual-based earnings management (AM) is 0.0342. Real-based earnings management from abnormal cash flow (RM_CFO), abnormal production cost (RM_PROD), and abnormal discretionary expenditure (RM_DISEXP) are 0.1312, 0.2671, and 0.078, respectively.

Table 3. Statistics descriptive analysis

Panel A: CEO characteristics					
	N	Value 1		Value 2	
FEMALE	707	90	12.73%	617	87.27%
AGE	707	166	23.48%	541	76.52%
TENURE	707	136	19.24%	571	80.76%
FIN	707	92	13.01%	615	86.99%
EDU	707	300	42.43%	407	57.57%
BUSINESS	707	94	13.30%	613	86.70%
Panel B: CFO characteristics					
FEMALE	707	104	14.71%	603	85.29%
AGE	707	275	38.90%	432	61.10%
TENURE	707	253	35.79%	454	64.21%
FIN	707	131	18.53%	576	81.47%
EDU	707	472	66.76%	235	33.24%
BUSINESS	707	139	19.66%	568	80.34%
Panel C: Top management characteristics					
FEMALE	1815	402	22.15%	1413	77.85%
AGE	1815	649	35.76%	1166	64.24%
TENURE	1815	604	33.28%	1211	66.72%
FIN	1815	185	10.19%	1630	89.81%
EDU	1815	1015	55.92%	800	44.08%
BUSINESS	1815	475	26.17%	1340	73.83%

Panel D: Firm characteristics

	N	Mean	Median	Max	Min	Stdev
FIRMSIZE (in billion rupiah)	707	941,000	1,509,596	747,000,000	3.3930	26,400,000
ROA	707	0.0655	0.0373	0.3755	-0.1039	0.1127
OCFVOL	707	0.1055	0.0733	0.4214	0.0271	0.0909
LEV	707	1.1085	0.7932	5.2088	-1.4595	1.3831
LOSS	707	0.2192	0	1	0	0.4140
Earnings Management						
AM	707	0.0342	0.0196	0.1422	0.0065	0.0359
RM_OCF	707	0.1312	0.0765	0.5828	0.0066	0.1483
RM_PROD	707	0.2671	0.1201	1.4631	0.0098	0.3739
RM_DISEXP	707	0.0785	0.0469	0.2973	0.0062	0.0813

The definition and measurement of variables have been presented in the previous explanation

Top management characteristics and AM

Table 4 presents the results of the associations between top management characteristics and AM for the combined top management characteristics both as a team and for individual management characteristics (CEO and CFO), using the full sample. We use the discretionary accrual model which was estimated by the Ali & Zhang (2015) model.Overall, these results find that the average female, older, and business background top management had a significant effect in the predicted direction. The coefficient and t-statistic

for female top management were -52680 and -1.6941 with a significance level of 10%. These results indicate that female top management tends to report lower earnings management accruals than male top management.

This provides evidence that female top management is more careful in choosing accrual earnings management strategies according to the characteristics of women who are considered more careful and behave ethically. Thus H_1a is supported.

Furthermore, the coefficients and t-statistics for the older top management are -36555 and -2.0151 with a significance level of 5%. These results support H_2a. Older top management tends to report lower accrual earnings management than younger top management. Older top management is more likely to be more careful in making strategic earnings management choices, as discussed earlier.

The coefficients and statistics for top management who have more business knowledge are –50714 and -2.6104 with a significance level of 1%. This finding indicates that top management uses its business knowledge to report low accrual earnings management compared to top management who does not have business knowledge. Thus hypothesis 5a is supported. Specifically, these findings show different results for CEOs and CFOs. CEO TENURE coefficient is positive and significant at the 1% level for the accrual model (AM). The coefficient values and t-statistics are 0.0088 and 3.3177. This results support H_3a. This finding indicates that CEOs with longer tenures tend to report earnings management (AM). In other words, CEOs with longer tenures tend to behave tactically and use their experience as CEO to manipulate financial statements by performing accrual-based earnings management. The coefficients and t-statistics for CEO education (EDU) are positive and significant with coefficients and t-statistics values of 0.0166 and 4.7019 at the 1% level for AM. These results support H_5a. These results provide evidence that CEOs with higher levels of education tend to do more accrual earnings management than CEOs with lower education levels.

These results provide evidence that CEOs with higher levels of education tend to do more accrual earnings management than CEOs with lower education levels. These results indicates that more educated CEOs have a better understanding to report accrual earnings management (Qi et al., 2018). Furthermore, CEOs with higher levels of education tend to choose AM as their preferred strategy compared to CEOs with less education. The BUSINESS coefficient for CEO is positive and significant at the 5% level, with coefficient and t-statistic values of 0.0080 and 2.8078. This indicates that H_5a is supported.

Table 4. Regression of accrual-based earnings management on top management characteristics and individual top management

Variables	Prediction sign	CEO			CFO			Top Management		
		coef	*t-stat*		*coef*	*t-stat*		*coef*	*t-stat*	
FEMALE	-	-0.0072	-1.3182		-0.0156	-2.8151	***	-52680	-1.6941	*
AGE	-	0.0039	1.4949		-0.0116	-2.1984	**	-36555	-2.151	**
TENURE	+	0.0088	3.3177	***	0.0000	-0.0046		22171	1.2091	
FIN	+	-0.0011	-0.2115		-0.0061	-1.1989		-46468	-1.3863	
EDU	+	0.0166	4.7019	***	0.0260	2.4237	**	26922	1.0922	
BUSINESS	+	0.0080	2.8078	***	0.0193	3.6346		-50714	-2.6104	**
FIRMSIZE	-	-0.0017	-2.0075	**	-0.0045	-2.7972	***	-9506	-4.6376	***
ROA	?	-0.0023	-0.1542		0.0421	1.6535	*	-54758	-0.5711	
OCFVOL	?	0.1317	9.3397	***	0.0728	2.5461	**	1	44.4626	***
LEV	?	0.0004	0.4456		0.0019	1.0000		-4049	-05773	
LOSS	+	0.0070	1.9055	**	0.0094	1.3687		-12818	-06395	
Industry Fixed Effects		Yes			Yes			Yes		

Year Fixed Effects	Yes			Yes			Yes	
Adj R-squared	0.1689			0.1924			0.7516	
F-statistics	14.0473	***		4.8327	***		229.5889	***
N	707			707			1815	

***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively
The definition and measurement of variables have been presented in the previous explanation

These results provide evidence that CEOs who have a business education background, management, and an MBA have a better understanding and knowledge of business than CEOs who do not have business, management, and business education backgrounds.

The CEO's business knowledge leads to higher skills and knowledge to do AM. This finding is in line with the previous CEO education level. The BUSINESS coefficient for CEO is positive and significant at the 1% level, with coefficient and t-statistic values of 0.0193 and 3.6346. This indicates that H5a is supported. These results provide evidence that CEOs who have a business education background, management, and an MBA have a better understanding and knowledge of business than CEOs who do not have a business education, management background and an MBA degree. The CEO's business knowledge causes CEOs to tend to be more aggressive in manipulating earnings by choosing the AM strategy than CEOs who do not have business knowledge. This is consistent with the previous findings of Qi et al., (2018).

Meanwhile, these results indicate that female and older CFOs tend to report lower accrual earnings management than male and younger CFOs. This is indicated by the coefficient value (t-stat) -0.0156 (-2.8151) with a significance level of 1% for female CFOs. The coefficient value (t-stat) for the older CFO is -0.0116 (-2.1984) with a significance of 5%. Furthermore, CFOs who have higher levels of education and have better business knowledge tend to report higher accrued earnings. Each reported coefficient value is 0.0260 (2.4237) with a significance level of 5% for CFOs with a high level of education. Each reported coefficient value is 0.0193 (3.6346) with a significance level of 1% for CFOs who have business knowledge.

Top management characteristics and RM

Table 5 reports the association between the characteristics of CEO, CFO, and top management and real activity-based earnings management (RM). Real activity-based earnings management includes RM_OCF, RM_PROD, and RM_DISEXP. Panel A Table 5 presents the results of regression analysis of top management characteristics and RM_OCF. These findings indicate that in general top management with longer tenure, financial expertise, higher education level, and business knowledge tend to report abnormal cash flow. Thus hypotheses H3b, H4b, and H5b are supported.

Furthermore, Panel B Table 5 shows that top management FEMALE, AGE, TENURE, and EDU have shown the direction that was predicted. This means that H1b, H2b, H3b, and H5b are supported. This finding indicates that overall the female top management tends not to manage earnings from real activities, especially by not manipulating production costs. The resulting coefficients and t-statistics are -0.1279 and -1.8066. This finding is in line with Qi et al., (2018). The coefficients and t-statistics for the AGE of the top management are positive and significant at the 10 percent level. These results indicate that the top management team as a whole is older in average tend to perform lower real earnings management by manipulating production costs than the younger top management team.

The coefficients and t-statistics for top management TENURE were positive and significant at the 10 percent level (coefficient = 0.0794 and t-statistic = 1.9014). This finding provides evidence that top management with longer tenures tend to manipulate production costs more than top management teams with shorter tenures. This study is conducted in a manufacturing company so that there is an indication that the top management with

longer tenure tends to manipulate profits from real activities by manipulating production costs. The coefficients and t-statistics for the top management s EDU showed the direction that was predicted at the 1 percent level (coefficient = 0.1675 and t-statistic = 2.9856). These results suggest that top management with higher education, especially those with higher levels of education, tend to be more aggressive in managing earnings from real activities by manipulating production costs.

Panel C Table 5 finds that of a number of characteristics of the top management tested by manipulation of earnings from discretionary expenditure, only the FIN variable has a significant positive effect at the 1% level. These results indicate that top management who has financial and accounting skills are more likely to manipulate expense discretion such as managing research and development expenses, sales expenses, and general and administrative expenses than top management teams who do not have financial skills. The top managements who have financial skills are familiar and have good knowledge of financial reports, so they become aware of how to manipulate discretionary spending.

Table 5. Regression of real activity-based earnings management on top management characteristics and individual top management

Panel A: RM OCF and top management characteristics										
Variables	Prediction sign	CEO			CFO			Top Management		
		coef	*t-stat*		*coef*	*t-stat*		*coef*	*t-stat*	
FEMALE	-	-0.4487	-0.4158		0.0179	0.6056		-0.2321	-1.3133	
AGE	-	-0.2462	-0.4792		-0.0577	-2.0517	**	-0.0341	-0.3309	
TENURE	+	-0.2643	-0.5065		0.0366	1.4208		0.2680	2.5720	**
FIN	+	2.8392	2.7303	***	0.0140	0.5155		0.5047	2.6494	***
EDU	+	0.5606	0.8089		0.0485	0.8454		0.2704	1.9301	*
BUSINESS	+	-0.8725	-1.5567		-0.0232	-0.8182		0.3318	3.0051	***
FIRMSIZE	-	-0.8725	-1.7180		-0.0022	-0.2481		-0.8985	-77.132	***
ROA	?	10.7305	3.7467	***	0.1951	1.4345		1.6213	2.9757	***
OCFVOL	?	7.5991	2.7466	***	0.1537	1.0070		0.0000	9.9190	***
LEV	?	-0.1457	-0.7873		0.0040	0.3908		0.0050	0.1244	
LOSS	+	1.2208	1.6975	*	0.0645	1.7656	*	0.1132	0.9940	
Industry Fixed Effects		Yes			Yes			Yes		
Year Fixed Effects		Yes			Yes			Yes		
Adj R-squared		0.0479			0.00414			0.0479		
F-statistics		4.2272			1.6943			4.2272		
N		707			707			1815		
Panel B: RM PROD and top management characteristics										
FEMALE	-	0.0711	5.6038	***	-0.0088	-0.6265		-0.1279	-1.8066	*
AGE	-	-0.0184	-3.0445	***	0.0210	1..5810		-0.0745	-1.8041	*
TENURE	+	0.0002	0.0269		0.0022	0.1818		0.0794	1.9014	*
FIN	+	-0.0062	-0.5066		0.0289	2.2448	**	-0.0973	-1.2748	
EDU	+	0.0133	1.6253	*	0.0223	0.8249		0.1675	2.9856	**
BUSINESS	+	-0.0004	-0.0672		-0.0247	-1.8397		0.0704	1.5925	
FIRMSIZE	-	-0.0066	-3.3709		-0.0039	-0.9545		-0.0680	-14.580	***
ROA	?	0.1790	5.3137		0.2260	3.5162	***	-0.0912	-0.4179	
OCFVOL	?	0.0230	0.7075		0.0948	1.3145		0.0000	-0.2624	
LEV	?	-0.0034	-1.5814		0.0003	0.0643		-0.0164	-1.0259	
LOSS	+	0.0003	0.0321		0.0007	0.0391		-0.1044	-2.2885	**
Industry Fixed Effects		Yes			Yes			Yes		

Year Fixed Effects		Yes			Yes			Yes		
Adj R-squared		0.0479			0.0983			0.2627		
F-statistics		4.2272	***		2.7540	**		27.9108	***	
N		707			707			835		
Panel C: RM DISEXP and top management characteristics										
Variables	Prediction	CEO			CFO			Top Management		
	sign	*coef*	*t-stat*		*coef*	*t-stat*		*coef*	*t-stat*	
FEMALE	-	-0.3136	-2.0685	**	0.0179	0.6056		-1.4458	-0.2142	
AGE	-	-0.0456	-0.7464		-0.0577	-2.0517	**	-0.5322	-0.1352	
TENURE	+	0.0831	1.4955		0.0366	1.4208		-1.0260	-0.2578	
FIN	+	0.0791	1.3166		0.0140	0.5155		21.863	2.9943	***
EDU	+	-0.0826	-0.6960		0.0485	0.8454		0.9723	0.1817	
BUSINESS	+	-0.0957	-1.5744		-0.0232	-0.8182		-4.8730	-1.1556	
FIRMSIZE	-	0.0016	0.0848		-0.0022	-0.2481		0.3598	0.8087	
ROA	?	0.2882	1.0166		0.1951	1.4345		63.3018	3.0417	***
OCFVOL	?	0.7432	2.2742	**	0.1537	1.0070		0.0000	0.2818	
LEV	?	-0.0169	-0.8069		0.0040	0.3908		-1.9624	-1.2891	
LOSS	+	0.1543	1.8312	*	0.0645	1.7656	*	3.6648	0.8423	
Industry Fixed Effects		Yes			Yes			Yes		
Year Fixed Effects		Yes			Yes			Yes		
Adj R-squared		0.0479			0.0414			0.0173		
F-statistics		4.2272	***		1.6943	*		2.3276	**	
N		707			707			835		

***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively
The definition and measurement of variables have been presented in the previous explanation

Sensitivity analysis results

Aggregate of top management characteristics

Panel A Table 6 presents the results of an additional analysis of the aggregate characteristics of top management (CEO, CFO, and top management) on AM and RM. In general, the test results provide evidence that top management tends to perform accrual-based earnings management (AM) compared to real-based earnings management (RM). The coefficients and t-statistics show a positive and significant direction at the 1 percent level (coefficient = 0.0027, t-statistics = 3.1772). These results suggest that top management (both individually and in teams) tends to choose the accrual earnings management strategy. High earnings management indicates the quality of earnings reported by top management is low.

Meanwhile, no positive and significant effect was found from top management and real-based earnings management (RM), either by manipulating cash flow (RM_OCF), manipulating production costs (RM_PROD), and manipulating discretionary expenses (RM_DISEXP). In general, sensitivity analysis showed consistent with the results of main tests when the characteristics were determined individually (CEO and CFO) and the top management.

Earnings management and top management characteristics by mature company

Panel B Table 6 reports the regression results of earnings management and top management characteristics by classifying whether the company is a mature company or a growing company based on DeAngelo et al. (2006). Sensitivity analysis finds that management characteristics have a positive and significant effect on accrual earnings management (coefficient = 0.0027 t-statistic = 3.1420). These results indicate that the characteristics of top management in the aggregate tend to report high earnings management, which in turn will affect the company's earnings quality.

Table 6. Sensitivity analysis results

Panel A: Earnings management and aggregate characteristics of top management												
	Pred	AM			RM OCF			RM PROD			RM DISEXP		
Variables	Sign	Coef	t-stat		Coef	t-stat		Coef	t-stat		Coef	t-stat	
Characteristics	?	0.0027	3.1772	***	0.0010	0.2595		-0.0028	-0.3855		0.0013	0.6584	
FIRMSIZE	-	-0.0017	-1.9895	**	-0.0058	-1.6139	*	0.0032	0.4530		-0.0064	-3.2716	***
ROA	?	-0.0081	-0.5479		0.2043	3.2407	***	0.3377	2.8671	***	0.1803	5.2555	***
OCFVOL	?	0.1263	8.9453	***	0.3576	5.9375	***	0.4063	3.5373	***	0.0114	0.3465	
LEV	?	-0.0005	-0.5193		-0.0009	-0.2268		-0.0037			-0.0051	-2.3138	**
LOSS	+	0.0073	1.9680	**	0.0322	2.0298	**	0.0502	1.6352	*	-0.0039	-0.4504	
Industry Fixed Effects		Yes			Yes			Yes			Yes		
Year Fixed Effects		Yes			Yes			Yes			Yes		
Adj R-squared		0.1252			0.0654			0.0295			0.0792		
F-statistics		17.8378	***		9.2352	***		4.2353	***		11.1160	***	
N		707	.		707			707			707		
Panel B: Earnings management and characteristics of top management by mature company													
Variables	Pred	AM			RM OCF			RM PROD			RM DISEXP		
	Sign	Coef	t-stat		Coef	t-stat		Coef	t-stat		Coef	t-stat	
Characteristics	?	0.0027	3.1420	***	-0.2451	-1.4750		-2.1442	-1.4476		0.0013	0.6636	
FIRMSIZE	-	-0.0017	-1.9765	**	-0.2926	-1.8017	*	-2.6345	-1.8200	**	-0.0064	-3.2710	***
ROA	?	-0.0065	-0.4228		11.9071	4.0393	***	89.9477	3.4235	***	0.1792	5.0220	***
OCFVOL	?	0.1257	8.8348	***	8.1938	3.0046	***	63.8336	2.6262	**	0.0118	0.3563	
LEV	?	-0.0005	-0.5508		-0.2319	-1.2887		-2.2113	-1.3671		-0.0050	-2.2934	**
LOSS	+	0.0074	1.9825	**	1.2887	-1.8045	***	9.1483	1.4372		-0.0039	-0.4546	
MATURE	?	-0.0010	-0.3795		-0.9407	-1.8206	***	-8.4133	-1.8268	*	0.0007	0.1067	
Industry Fixed Effects		Yes			Yes			Yes			Yes		
Year Fixed Effects		Yes			Yes			Yes			Yes		
Adj R-squared		0.1241			0.0430			0.0334			0.0779		
F-statistics		15.291	***		5.5329	***		4.4798	***		9.5162	***	
N		707			707			707			707		

***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively

The definition and measurement of variables have been presented in the previous explanation

Top management characteristics which include the proportion of female top management, older age, longer tenure, higher education level, better business skills, and better financial skills actually use their knowledge and experience to manipulate earnings with accruals management. Furthermore, there is no significant effect of manufacturing companies to perform accrual earnings management. This means, when the company is in the mature stage, top management tends not to do accrual earnings management.

Meanwhile, management characteristics have no significant effect on earnings management from real activities. However, companies that are in the mature stage have a negative influence on real earnings management by manipulating cash flow (RM_OCF) and manipulating production costs (RM_PROD). This finding suggests that growth companies tend to manipulate earnings with RM_OCF and RM_PROD so that the profit target can be achieved. Because when the company is in the growth stage, the company requires high operating cash flow and low production costs in order to get easy loans from other parties. Higher operating cash flow and low production costs, it reflects the company's management is able to manage profits well. Therefore, at the growth stage, top management becomes aggressive to manipulate earnings with operating cash flow and production cost.

5. Conclusions

This study investigates the effect of top management characteristics on earnings management of Indonesian manufacturing companies. This study focuses on the strategic choice of earnings management, either earnings management that will be chosen by the top management team, which includes accrual-based management (AM) or real activity-based earnings management (RM). The focus characteristics of top management in this study are gender, age, tenure, education, and financial expertise. Overall, the results of this study find that in general the top management team is more likely to choose the strategic choice of real-based earnings management compared to accrual management. The real-based earnings management strategy chosen is to manipulate operating cash flow and production costs. However, specifically, individual top executives, both CEOs and CFOs, are more likely to choose accrual earnings management strategies than real-based earnings management.

Sensitivity analysis by aggregating all top management characteristics (gender, age, tenure, education level, business skills, and finances) shows consistent results with the main test. Top management tends to choose accrual earnings management as a choice of earnings management strategy compared to real earnings management. Meanwhile, sensitivity analysis by distinguishing mature and growing companies shows that mature companies tend to lack real earnings management by manipulating operating cash flows and production costs. In other words, mature companies tend to report better earnings quality.

This study has limitation. This study only focuses on the characteristics of the top management team both as a whole and individually (CEO and CFO) on observable characteristics and only based on archival data. Future studies should take into account the psychological factors of the top management team as a whole and individually (CEO and CFO) and consider experimental or survey methods.

This study has important implications for future research. First, policy makers such as especially the Financial Services Authority Indonesia (OJK RI), management, shareholders, government, and other stakeholders need to consider the characteristics of executives. Especially the demographic characteristics of the CEO as a corporate decision maker related to the quality of financial reporting by choosing an earnings management strategy whether accrual earnings management or earnings management from real activities. Second, executive characteristics have an important role in suppressing the occurrence of earnings management or earnings

manipulation in the company, both individually (CEO and CFO) and as a team (all top management). These results recommend that when a company chooses and appoints a CEO and CFO, it is necessary to consider the demographic characteristics of both the executive characteristics individually and in the aggregate because this is a crucial matter.

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