

The Impact of CEO Characteristics on Earnings Per Share and Earnings Management

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The purposes of research were to examine the effect of Chief Executive Officer (CEO) characteristics' on earnings per share (EPS) and earnings management. The research samples are 104 manufacture companies listed in the Indonesian Stock Exchange 2013-2017. Hypotheses test use multiple regression. The result shows that CEO's narcissism, education, age, tenure, and nationality have an effect on EPS, while CEO's gender has no effect on EPS. CEO's narcissism and education have a positive effect on accrual earnings management, while CEO's gender and nationality have a negative effect on accrual earnings management to manage EPS. CEO's age and tenure have no effect on accrual earnings management. CEO's narcissism has a positive effect on real earnings management; while CEO's gender, education, tenure, and nationality have a negative effect on real earnings management to manage EPS. CEO's age has no effect on real earnings management.

Keywords: CEO Characteristics, Earnings Per Share, Earnings Management

1 INTRODUCTION

Chief Executive Officer (CEO) is the top manager who leads the company. The CEO is responsible for business activities such as the accounting process and financial statement preparation. The importance of CEO towards earnings information in measuring CEO performance focuses on the earnings per share. This is because (1) Shareholders or owners are more focused on EPS than other accounting data (2) Business media focused on EPS (3) Analysts focused on forecasting EPS (4) EPS is announced regularly on annual basis (5) EPS calculations are strongly influenced by estimation, policies and accounting assessment from CEO (6) Compensation for senior manager is usually associated with EPS [1].

The first characteristic of a CEO is narcissism. Narcissism is a psychological construct that is interpreted as considering oneself important, the level of uniqueness, selfishness, getting it by themselves, admiring themselves, arrogant, self-praise, high demands, and arrogant [2]. Olsen *et al* [1] found that CEO narcissism has a significant relationship with reported earnings, Olsen also found that CEOs with high narcissism level will increase profits through earnings manipulation of operational activities and accrual manipulation.

The second characteristic of the CEO is gender. Although men and women do the same tasks, their way of finishing the tasks are quite different. Women have more stable and mature emotions [3], are more risk-averse [4], and are accustomed to multitasking [5] than men; therefore, female CEOs are more effective in coordinating, controlling, and supervising the management and employees in carrying out policies and

strategies than male CEOs. Female CEOs also tend to depend on facts and detailed information [6]. The effectiveness of the female CEO in managing the company can increase the EPS. In increasing profit, female CEOs tend not to cheat compared to male CEOs.

Another CEO characteristic is the education level. The level of education illustrates CEO's ability [7]. CEOs with higher education level tend to have the complexity of thinking, ability to come up with new ideas; therefore, the CEO is able to implement the company's strategy effectively [8]. With those capabilities, CEOs with higher education levels can increase the EPS. In reporting the financial performance, CEOs with higher education levels tend to use their ability to increase profits with accrual earnings management [9]. That is because CEOs with higher education level can reduce limitations of using accrual earning management [9].

The fourth CEO characteristic is age. Age describes how far the CEO's career and experience is and how it relates to company performance [7]. Older CEOs have a competitive advantage than younger CEOs, which is more experience [10], because experience is an important factor in strategic decision making [11]. The fifth characteristic is tenure. CEO's tenure describes how long the CEO served the company. Tenure also illustr

ates the CEO's experience. The longer the tenure, the more capable the CEO at decision making, this is because the CEO has more experience and knowledge about the business environment and company activities [12].

The last characteristic of CEOs is their citizenship. In this study, the CEO's citizenship is divided into foreign CEOs and local CEOs. Foreign CEOs refer to CEOs who are not citizens of the country where they lead the company [13]. Foreign CEOs have international experience as a competitive advantage to improve company performance [14]. They understand more about international markets and are able to create unique strategies [14], so they are better in increasing EPS. Based on

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the explanation above, this study aims to observe and analyze "The impact of CEO Characteristics on Earnings Per Share and Earnings Management".

2 THEORITICAL BASIS AND HYPOTHESIS

2.1 Agency Theory

Agency theory was first introduced by Jensen & Meckling [15], which explains the agency relationship as a contract between one or more parties (principal) that binds other parties (agents) to manage the company based on the principal's benefit, including the delegation of decision-making authority to the agent. The focus of this theory is the agency conflict which arises due to differences in interests between principal and agent. Difference in information and conflict of interest between the principal and agent encourage the agent to give a false information to the principal. One of the agent's doing is earnings management.

2.2 Upper Echelons Theory

In Upper Echelons Theory, managers act based on an assessment or interpretation of the situation they faced. Individual rationality is the constraint in upper echelons theory. As it's hard to present the psychological dimension, UET comes up with observable demographic characteristics (such as gender, education level, age, and tenure) as a proxy to represent psychological differences. This theory introduces that the characteristics of top managers influenced their strategy selection and the results they got.

2.3 Hypothesis

The hypotheses are:

H1a: CEO's narcissism level has a positive impact on earnings per share (EPS).

H1b: CEO's narcissism level has a positive impact on the tendency to manage EPS with accrual earnings management.

H1c: CEO's narcissism level has a positive impact on the tendency to manage EPS with real earnings management.

H2a: Female CEO has a positive impact on earnings per share (EPS).

H2b: Female CEO has a negative impact on the tendency to manage EPS with accrual earnings management.

H2c: Female CEO has a negative impact on the tendency to manage EPS with real earnings management.

H3a: CEO's education level has a positive impact on earnings per share (EPS).

H3b: CEO's education level has a positive impact on the tendency to manage EPS with accrual earnings management.

H3c: CEO's education level has a negative impact on the tendency to manage EPS with real earnings management.

H4a: CEO's age has a positive impact on earnings per share (EPS).

H4b: CEO's age has a negative impact on the tendency to manage EPS with accrual earnings management.

H4c: CEO's age has a negative impact on the tendency to manage EPS with real earnings management.

H5a: CEO's tenure has a positive impact on earnings per share (EPS).

H5b: CEO's tenure has a negative impact on the tendency to manage EPS with accrual earnings management.

H5c: CEO's tenure has a negative impact on the tendency to manage EPS with real earnings management.

H6a: Foreign CEO has a positive impact on earnings per share (EPS).

H6b: Foreign CEO has a negative impact on the tendency to manage EPS with accrual earnings management.

H6c: Foreign CEO has a negative impact on the tendency to manage EPS with real earnings management.

3 RESEARCH METHODOLOGY

3.1 Sample

The sample selection method used in this study is purposive sampling method with certain criteria that are relevant to the topic of discussion. The sample criteria in this study are as follows:

1. All manufacturing companies listed on the Indonesia Stock Exchange for the 2013-2017 period. Manufacturing companies experience more uncertainty in sales and profits [16]. Rasmussen [17] also explains that manufacturing companies often experience a decrease in performance because they experience the obsolescence of product supply before the product reaches the end consumer. The uncertainty of sales and profits, as well as the decline in performance, influence the manufacturing company to manipulate earnings to achieve certain profit targets.

2. The company that publishes an annual report with data needed in this study.

Table 1 Results of Sample Selection

Criteria	Total
All manufacturing companies listed on the Indonesia Stock Exchange for 2013-2017 period	128
The annual report that does not presents the CEO's age and education level	(20)
Replace the financial reporting period	(4)
Total of Companies	104
Total Samples for 2013-2017	520

3.1 Data Analysis Method

This study uses statistical analysis for the data analysis method. The statistical analysis used was a regression analysis with a significance level 0.05 (5%). This study uses a classical assumption test to ensure an unbiased regression model, consisting of a normality test, an autocorrelation test, and a multicollinearity test. The multiple regression model in this study is as follows:

$$EPS = a + b_1NAR + b_2GENDER + b_3EDU + b_4AGE + b_5TEN + b_6CS + e$$

$$AEM = a + b_1NAR + b_2GENDER + b_3EDU + b_4AGE + b_5TEN + b_6CS + e$$

$$REM = a + b_1NAR + b_2GENDER + b_3EDU + b_4AGE + b_5TEN + b_6CS + e$$

Information:

EPS = Earnings Per Share

AEM = Accrual earnings management

REM = Real earnings management

NAR = CEO's level of narcissism

GENDER= CEO's gender

EDU = CEO's level of education

AGE = CEO's age
 TEN = CEO's tenure
 CS = CEO's citizenship

3.1 Operationalization Variable

The dependent variables are earning per share (EPS), accrual earnings management and real earnings management. Meanwhile, the independent variable is the characteristics of the CEO, consisting of CEO' narcissism level, CEO's gender, CEO's education level, CEO's age, CEO's tenure, and CEO's citizenship. Earnings management is detected by using a modified Jones model with a discretionary accrual proxy, the estimation is as follows [18].

$$\frac{TAC_t}{TAt-1} = b_0 + b_1 \frac{1}{TAt-1} + b_2 \frac{\Delta SALES_t}{TAt-1} + b_3 \frac{PPE_t}{TAt-1}$$

Information:

TAC = Total Accrual
 TAt-1 = Total Asset of The Previous Period
 $\Delta SALES$ = Change in Sales
 PPE = Property, Plant and Equipment

Real earnings management is measured through abnormal operating cash flow (related to sales manipulation), abnormal production (related to overproduction), and abnormal discretionary costs (related to the reduction in discretionary costs), the real earnings management is as follows:

$$CFO_t = a + b_0 \frac{1}{Assets_{t-1}} + b_1 \frac{Sales_t}{Assets_{t-1}} + b_2 \frac{\Delta Sales_t}{Assets_{t-1}} + \theta_t$$

$$Prod_t = a + b_0 \frac{1}{Assets_{t-1}} + b_1 \frac{Sales_t}{Assets_{t-1}} + b_2 \frac{\Delta Sales_t}{Assets_{t-1}} + b_3 \frac{\Delta Sales_{t-1}}{Assets_{t-1}} + \theta_t$$

$$Discretionary\ expenses_t = a + b_0 \frac{1}{Assets_{t-1}} + b_1 \frac{Sales_t}{Assets_{t-1}} + \theta_t$$

$$RealEarningsManagement = -abnormalCFO + abnormalPROD - abnormalDISEXP$$

Information:

CFO_t = Operation cash flow for t period divide with asset for t-1 period
 Prod_t = Production cost for t period
 Discretionary Expense_t = [Cost of sales for t period added with research and development expenses for t period] divided with asset in t-1 period
 Sales_t = Sales for t period
 $\Delta Sales_t$ = Changes in sales for t period
 $\Delta Sales_{t-1}$ = Changes in sales for t-1 period
 Assets_{t-1} = Assets for t period

The CEO's photograph on the annual report is used to measure the CEO's level of narcissism as it is a standard feature in the annual report [1]. Score 1 for annual report that do not show CEO's photograph, 2 for annual reports that show CEO's photograph along with other top managers, 3 for annual reports that show the CEO's own photograph with the size up to half a page, 4 for annual reports that show CEO's own photograph with a size of more than half a page and a little extra text, and a score of 5 for annual reports that show the CEO's own photograph with a full-page size. The gender of the CEOs is measured using a dummy or categorical

variable. A score of 1 for female CEOs and a score of 0 for male CEOs.

The CEO's level of education is seen from the last education graduates taken by the CEO. The CEO's education level is measured using the following scores. A score of 1 for CEOs graduating from high school/equivalent, 2 for CEOs with vocational degree/equivalent, 3 for CEOs with bachelor degree/equivalent, 4 for CEOs with master degree/equivalent, and a score of 5 for CEOs with doctoral degree [9]. The CEO's age is measured from the annual report. The tenure of the CEO is the cumulative amount of CEO's term of service in a company. The CEO's citizenship is a categorical variable of dummy. A score of 1 for foreign CEOs and 0 for local CEOs.

4 RESULTS AND DISCUSSION

3.1 Statistical Test

Table 2 Results of Descriptive Statistics

Variable	Minimum	Maximum	Average	Standard Deviation
EPS	-3.013,53	17.989,77	287,78	1.446,24
AEM	-0,62	2,54	0,00	0,16
REM	-2,36	1,90	0,00	0,45
CEO's Narcissism	1,00	5,00	2,95	1,20
CEO's Education Level	1,00	5,00	3,15	0,78
CEO's Age	33,00	78,00	54,73	8,84
CEO's Tenure	0,00	46,00	9,38	10,46

Source: Data Processed with SPSS

3.2 Classical Assumption Test

Table 3 Results of Classical Assumption Test

	EPS Model	AEM Model	REM Model
Significance of K-S Test (before trimming)	0,000	0,000	0,000
Significance of K-S Test (after trimming)	0,059	0,109	0,081
Significance of Glejser Test	> 0,05	> 0,05	> 0,05
Significance of Run Test	> 0,05	> 0,05	> 0,05
VIF	< 10	< 10	< 10
Tolerance	> 0,1	> 0,1	> 0,1

Source: Data Processed with SPSS

Table 3 shows that the K-S significance value for the EPS regression model, AEM model, and REM model is 0,000 (below 0.05). These results indicate that the data is not normally distributed. Hartono [19] states that the problem of

normality test can be overcome with the trimming method. In the trimming process for the normality test, this study eliminated 87 samples in the earnings per share (EPS) regression model, 27 samples in the accrual earnings management (AEM) regression model, and 38 samples in the real earnings management (REM) regression model. The net sample after trimming is 443 samples in the earnings per share (EPS) regression model, 493 samples in the accrual earnings management (AEM) regression model, and 482 samples in the real earnings management (REM) regression model. The significance value of K-S test after trimming for the EPS model was 0.059 (above 0.05); the significance value of the normality test for the AEM model is 0.109 (above 0.05); and the significance value of the normality test for the REM model is 0.081 (above 0.05). These results indicate that the data are normally distributed for all regression models. Glejser test results shows that the significance value of all CEO characteristics variables used in this study for the EPS regression model, AEM regression model, and REM regression model is above 0.05. These results indicate that this study is free from heteroscedasticity. The run test results show that the significance value of the three regressions model is above 0.05. These results indicate that this study is free from autocorrelation problem. VIF and tolerance test results show that the VIF value is below 10 and the tolerance value is above 0.1 for all regression models. These results indicate that this study is free of multicollinearity problems.

3.2 Regression Test

Table 4 Results of Regression Test

Independent Variable	Coefficient	Significance	Coefficient	Significance	Coefficient	Significance
Constant	-225,298		-0,085		0,164	
NARCISSISM	17,420	0,020	0,006	0,015	0,028	0,015
GENDER	-21,927	0,512	-0,030	0,010	-0,446	0,000
EDUCATION LEVEL	32,914	0,005	0,009	0,019	-0,067	0,000
AGE	2,708	0,016	0,001	0,117	0,002	0,186
TENURE	2,002	0,031	-0,000	0,989	-0,003	0,040
CITIZENSHIP	279,782	0,000	-0,019	0,016	-0,087	0,016
Dependent Variable	Earnings Per Share (EPS)		Accrual Earnings Management (AEM)		Real Earnings Management (REM)	

Source: Data Processed with SPSS

The regression test for the EPS model shows the CEO's narcissism variable (NARCISSISM) has a regression coefficient of 17.420 and a significance value of 0.020 (below 0.05). The CEO gender variable (GENDER) has a regression coefficient of -21,927 and a significance value of 0.512 (above 0.05). The CEO's level of education variable (EDUCATION LEVEL) has a regression coefficient of 32,914 and a significance value of 0.005 (below 0.05). The CEO's age variable (AGE) has a regression coefficient of 2.708 and a significance value of 0.016 (below 0.05). The CEO's tenure variable (TENURE) has a regression coefficient of 2.002 and a significance value of 0.031 (below 0.05). The variable of CEO's citizenship

(CITIZENSHIP) has a regression coefficient of 279,782 and a significance value of 0,000 (below 0.05). Regression test for accrual earnings management regression shows the CEO's narcissism variable (NARCISSISM) has a regression coefficient value of 0.006 and a significance value of 0.015 (below 0.05). The CEO's gender variable (GENDER) has a regression coefficient of -0.030 and a significance value of 0.011 (below 0.05). The CEO's education level variable (EDUCATION LEVEL) has a regression coefficient of 0.009 and a significance value of 0.019 (below 0.05). The CEO's age variable (AGE) has a regression coefficient of 0.001 and a significance value of 0.117 (above 0.05). The CEO's tenure variable (TENURE) has a regression coefficient of -0,000 and a significance value of 0.989 (above 0.05). The variable of the CEO's citizenship (CITIZENSHIP) has a regression coefficient of -0.019 and a significance value of 0.016 (below 0.05). Real earnings management regression test shows the CEO's narcissism variable (NARCISSISM) has a regression coefficient of 0.028 and a significance value of 0.015 (below 0.05). The CEO's gender variable (GENDER) has a regression coefficient of -0.444 and a significance value of 0.000 (below 0.05). The CEO's education level variable (EDUCATION LEVEL) has a regression coefficient of -0.067 and a significance value of 0,000 (below 0.05). The CEO's age variable (AGE) has a regression coefficient of 0.002 and a significance value of 0.186 (above 0.05). The CEO's tenure variable (TENURE) has a regression coefficient of -0.003 and a significance value of 0.040 (below 0.05). The variable of CEO's citizenship (CITIZENSHIP) has a regression coefficient of -0.087 and a significance value of 0.016 (below 0.05).

4 CONCLUSION

Based on the results and discussion above, it showed that CEO's narcissism, education level, age, tenure and citizenship had a positive impact on earning per share, while the CEO's gender did not affect earning per share. Narcissism and education level of CEOs have a positive impact on accrual earnings management, while CEO's gender and citizenship negatively affect accrual earning management to manage earning per share, the CEO's age and tenure do not affect accrual earnings management. CEO's narcissism has a positive impact on real earnings management, while CEO's gender, education level, tenure, and citizenship negatively affect the real earnings management to manage earning per share. The CEO's age does not affect real earnings management.

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