

CHIEF FINANCIAL OFFICER ACCOUNTING EDUCATION BACKGROUND AND EARNINGS MANAGEMENT

Septina Dwi Wulandari¹, Poppy Nurmayanti M², Novita Indrawati³

¹ Riau University, Faculty of Economics and Business, Accounting Study Program

² Riau University, Faculty of Economics and Business, Accounting Study Program

³ Riau University, Faculty of Economics and Business, Accounting Study Program

Abstract

This study aims to examine the effect of the chief financial officer accounting education background on earnings management. This study uses two measures of earnings management that are abnormal accrual and abnormal discretionary expense. This study uses all manufacturing companies listed in the Indonesia Stock Exchange (IDX) from 2016 to 2019 as the sample with the final sample is 360 firm-years. The data analysis technique used in this study is multiple regression analysis. These results show that accounting education background affects earnings management. It is expected that policy maker such as company management, investors, and shareholders.

Keywords: chief financial officer, abnormal accruals, abnormal discretionary expense, education, accounting education background

1. Introduction

Earnings is one of the important parameters used in a company in measuring management performance (Setyaningrum et al., 2019). In making economic and investment decisions, earnings information can affect investors, creditors, and other parties. In addition, earnings information can also be used as a benchmark for the current value of the company or as a prediction of the company's value in the future as well as an assessment of the success or failure of the business in achieving the set operating goals. In order for the company to appear to have good performance, the company tries to achieve the desired profit target so that it can attract external parties. The action to achieve the earnings target is called earnings management. Earnings management actions can be done by choosing accounting policies so that profit can be regulated in accordance with the wishes of management (Yasa and Novialy, 2012).

Earnings management practices cause the earnings reported in the financial statements do not reflect the actual state of the company. Earnings management actions will have an impact on users of financial statements who believe in profit figures in financial statements because earnings management actions will affect the values in financial statements. Thus, earnings management can reduce the quality and trustworthiness of financial statements when used to make decisions, because the results of these financial statements do not display the actual state of the figures. Earnings manipulation occurs when managers alter financial statements to influence stakeholders.

The phenomenon related to earnings management occurs in manufacturing companies in Indonesia, namely Tiga Pilar Sejahtera Food or TPS Food, coded as AISA issuer. On Tuesday (11/2) released the financial statements for the financial years 2017, 2018, and the first semester of 2019. The 2017 financial statements reveal the results of the restatement of the previous report because they were allegedly manipulated by the management of the old company led by Joko Mogoginta (Fajrian, 2020). The allegation of manipulation of financial statements in 2017 is only one of the problems that TPS Food has. PT AISA is suspected of inflating Rp. 4 trillion in funds in the 2017 financial report. This was revealed in the report on the results of a fact-based investigation by Ernst and Young Indonesia (EY) on AISA's new management dated March 12, 2019.

Alleged inflation has been identified in the accounts receivable, inventories and fixed assets of PT AISA. In addition to the Rp 4 trillion mark-up in funds, there were also findings of an alleged inflation of Rp. 662 billion in revenue and another Rp. 329 billion in the EBITDA post of the issuer's food business entity. EY also found a flow of funds of Rp 1.78 trillion under various schemes from companies to parties affiliated with the old management. In addition, it was also found that there were relationships and transactions with affiliated parties that did not use adequate disclosure mechanisms to relevant stakeholders. From the results of the EY report, it was also found that there were different financial records in internal data with the records used by the financial auditors in the process of auditing the 2017 financial statements. EY based on new management information that AISA's old management made different books for external purposes, for example for external audit purposes.

Incorporate governance, the top management team is the top-level management who has the task of directing and coordinating all company activities as a whole so that the company's goals can be achieved (Taolin, 2019). One of the top management teams involved in financial reporting is the CFO (Chief Financial Officer) or usually referred to as the chief financial officer. The CFO is generally responsible for all financial functions of the company. The responsibilities of a CFO also include the use of accounting principles, procedures, and preparation of financial reports (Hidayatullah and Tazkia, 2018).

Previous research has shown the relationship between earnings management and the characteristics of the top management team (such as CEO/CFO tenure, CEO/CFO gender, and) CEO financial expertise (Nurmayanti M and Rakhman 2017; Vernando and Rakhman 2018; Wei and Xie 2010)). However, top management team education (proxied by a background in accounting or finance education) in the context of public companies in Indonesia have not been widely explored.

This study focuses on the CFO accounting educational background. In particular, the CFO's accounting education background has an important role and determines the quality of financial reports since the CFO is responsible for the company's financial functions (Aier et al., 2005). With their accounting knowledge, CFO can apply a variety of methods to adjust corporate profits to achieve their anticipated targets. This is in line with Chiang et al., (2016)' study which finds that accounting education background affects earnings management. Furthermore, Isidro and

Gonçalves (2011) describe that managers with an accountant study background are more susceptible to income smoothing.

This study extends Qi et al., (2018) on the characteristics of the top management team (TMT), namely age, gender, financial work experience, and education level. The object of previous research was Chinese companies listed on the A-share market from 2000 to 2015. This study is important from Qi et al., (2018) in several ways. First, this study is conducted in manufacturing companies in Indonesia while Qi et al., (2018) are conducted in Chinese companies. Second, this study uses control variables, firm size, return on assets, and leverage.

This study selects the CFO because the CFO is a company officer who is directly related and responsible for the finances of a company. Many companies think that the CFO is the second most important person after the CEO, because an understanding of finance is needed in managing the company (Woning, 2014). Wei and Xie, (2010) stated that in the company's annual report, the CFO is usually the second or third person on the list of the company's top management team, only after the CEO or COO (executive vice general manager or president in several companies). This signifies the importance of the position of CFO as well as the power and responsibilities that CFO has.

This study uses 360 firm-years from the year 2016 to 2019 from manufacturing companies listed on the IDX. CFO profile data and financial data are obtained from the annual report published by the Indonesia Stock Exchange with hand-collected. These results find that accounting education background influences on earnings management. CFO has knowledge in accounting or finance, this knowledge will be used to increase revenue and polish the company's financial statements. In addition, with their accounting knowledge, CFO can apply various methods to adjust company profits to achieve their anticipated targets.

Theoretically, this research has implications for the upper echelons theory. The results showed that the CFO accounting education background will increase the occurrence of earnings management. The results of this study are expected to encourage accounting research related to the characteristics of CFO to further analyze other variables that affect earnings management. This research is also expected to provide recommendations to policymakers such as company management, investor actors, shareholders, and other stakeholders when hiring CFO to give additional attention because CFO can polish the company's financial statements based on their accounting knowledge. In addition, this research is expected to provide recommendations to regulators in terms of determining the qualifications or requirements to become a CFO, can consider the characteristics of the CFO as a party directly related to financial statements that will be related to the quality of financial reports such as the CFO accounting education background. Because the quality of the characteristics of the CFO will play an important role in suppressing the occurrence of earnings management in a company.

The systematics of writing this research is explained as follows. The next section will describe the literature review and hypothesis development. Next, we will discuss research methods such as sampling, data, and variable measurement. The next section discusses the results of the

analysis. The final section is a concluding section that discusses the conclusions and implications.

2. Literature Review and Hypothesis Development

Upper echelon theory

The upper echelon theory explains that the characteristics of each member of the top management team in analyzing, interpreting, and selecting strategies will be different. Upper echelon theory also explains that the background and cognitive values of leaders reflect their chosen strategy. In addition, the managerial background will affect them in dealing with the situations they face such as experience, values, and personality greatly affect interpretations which will have an impact on their choices (Hambrick and Mason, 1984).

In upper echelon theory, managers act based on an assessment or interpretation of the situations they face. In making decisions, top executives are influenced by many factors such as factors that can be observed directly and factors that cannot be observed directly. Factors that can be directly observed are called demographic factors. Meanwhile, factors that cannot be observed directly are called psychological factors (Poppy (2019)). Upper echelon theory comes with observable demographic characteristics (such as gender, education, age, and ownership) as proxies for representing psychological differences. This theory introduces that the characteristics of top managers influence their choice of strategy and the results they get.

Earnings Management

Earnings management is an action to achieve earnings targets by choosing accounting policies so that earnings can be adjusted according to management's wishes (Yasa and Novialy, 2012). According to Healy and Wahlen (1999) earnings management is the manager's policy of using certain decisions in financial reporting with the use of various accounting methods to mislead and hide the true condition of the company from stakeholders to influence agreements or contracts made based on reported accounting numbers. This study uses two proxies for earnings management, namely abnormal accruals and abnormal discretionary expenses.

CFO Accounting Education Background and Earnings Management

Education reflects the ability and skills of an executive to influence corporate strategic decisions. According to Hambrick and Mason (1984) in the upper-echelons theory states that the higher the education taken by a person, the more complex the knowledge and experience he has and has a large cognitive complexity to absorb new ideas so that he can implement more effective strategies. In companies, the board of directors has different educational backgrounds so that they have different decision results in the company. In particular, the CFO's accounting education background has an important role in the preparation and quality of financial reporting, because the CFO is the party responsible for the company's financial functions. Isidro dan Gonçalves (2011) argue that managers with accounting background studies are more prone to income smoothing.

We argue that CFO with accounting education backgrounds will use their abilities, skills, and knowledge and better understand the gaps that can be made in earnings management. Based on the arguments, we propose the following hypothesis:

H1: CFO accounting education background affects earnings management

3. Research Methods

The population in this study were manufacturing companies listed on the IDX in 2016-2019 using purposive sampling technique so that 90 companies that met the criteria were selected, with an observation year of 4 years so that the total sample observed was 360 samples. In this study, data was collected through the idx.co.id website and then downloaded the annual reports and annual financial reports to record data according to the required variables.

This study uses CFO education which is proxied by an accounting educational background. To measure earnings management, we use abnormal accrual and abnormal discretionary expense. Control variables are company size, return on assets, and leverage.

In this study, abnormal accruals are used as proxies for accrual-based earnings management based on Mc. Nichols's (2002) accrual model which has been modified by Dechow and Dichev (2002) in Gounopoulos and Pham (2018) to considers that bias due to long-run accruals and modifying the model to include changes in sales and property, plant, and equipment. The equation of discretionary accruals is expressed in equation (1) as follows.

$$\frac{TCA_{i,t}}{TA_{i,t-1}} = + + + \beta_0 \frac{1}{TA_{i,t-1}} \beta_1 \frac{CFO_{i,t-1}}{TA_{i,t-1}} \beta_2 \frac{CFO_{i,t}}{TA_{i,t-1}} \beta_3 \frac{CFO_{i,t+1}}{TA_{i,t-1}} + \beta_4 \frac{\Delta SALES_{i,t}}{TA_{i,t-1}} + \beta_5 \frac{PPE_{i,t}}{TA_{i,t-1}} \varepsilon_{i,t-1} \tag{1}$$

Where:

$TCA_{i,t}$: Total *current assets* company i in year t

$CFO_{i,t}$: Cash flow from the operation of the company i in year t

$PPE_{i,t}$: *Gross value of plant, property, and equipment* company i in year t

$NIBE_{i,t}$: Net income before extraordinary company i in year t

$DEPN_{i,t}$: Depreciation and amortization expenses company i in year t

$TA_{i,t-1}$: Total assets of the previous year

$\Delta SALES_{i,t}$: Change in sales of the company i in year t

$\Delta CA_{i,t}$: Change in current assets of the company i in year t

$\Delta CASH_{i,t}$: Change in cash of the company i in year t

$\Delta CL_{i,t}$: Changes in the current liabilities of the company i in year t

$\Delta STD_{i,t}$: Change *short term debt* company i in year t

To measure abnormal discretionary expense, we follow Ali and Zhang (2015). The discretionary expenses include research and development costs, advertising, and maintenance costs are charged in the same period. The equation for the abnormal discretionary expense is expressed in equation (2) as follows.

$$\frac{DISEXP_{i,t}}{TA_{i,t-1}} = + + \beta_0 \frac{1}{TA_{i,t-1}} \beta_1 \frac{SALES_{i,t-1}}{TA_{i,t-1}} \varepsilon_{i,t-1} \tag{2}$$

Where:

DISEXP_{i, t}: *Discretionary expense* company *i* in year *t* which represents the sum of sales, general, and administrative expense, research, and development expense, and advertising expense.

TA_{i, t-1}: Total assets of the company *i* in the previous year

SALES_{i, t-1}: *Sales* company *i* in the previous year

The level of accounting education background is proxied by a dummy variable, namely the CFO who has an educational background in accounting is given a score of one (1) and the CFO who does not have an accounting education background is given a score of zero (0).

Furthermore, we used firm size, ROA, and leverage as control variables. Firm variables are reflected from the number of assets owned by a company. Firm size uses the measurement used by (Prasadhita and Intani, 2017) which is expressed in equation 3.

$$Size = \ln \text{ Total Asset} \quad (3)$$

ROA is one of the financial ratios used to show a company's ability to manage assets efficiently. ROA in this study uses the measurement used by Zalfaa (2011) which is expressed in equation 4.

$$ROA: \frac{\text{NetProfit}}{\text{Total Assets}} \quad (4)$$

Leverage is the ratio used by the company to measure the extent to which the company's assets are financed by debt in carrying out its operational activities. Leverage in this study is proxied by the Debt to Asset Ratio (DAR) which refers to Karina and Sutandi (2019) which is expressed in equation 5:

$$Leverage: \frac{\text{Total Debt}}{\text{Total Assets}} \quad (5)$$

Regression Model

This study uses multiple linear regression analysis to test the effect of educational background on earnings management with the following regression model.

$$ABNAC = \alpha + \beta_1 AK + \beta_2 SIZE + \beta_3 ROA + B_4 LEV + \varepsilon \quad (5)$$

$$ABDIEX = \alpha + \beta_1 AK + \beta_2 SIZE + \beta_3 ROA + B_4 LEV + \varepsilon \quad (6)$$

These variables are defined as follows:

ABNAC = abnormal accruals, which is estimated in the previous equation;

ABDIEX = abnormal discretionary expense, which is estimated in the previous equation;

AK = CFO with accounting education background, dummy variable, 1 if CFO has an accounting education background, 0 if vice versa;

SIZE = firm size, as measured by the natural logarithm of the asset;

ROA = return on assets, which is measured by net income after tax divided by total assets;

LEV = leverage, which is measured by total debt divided by total assets;

4. Results and Discussion

Result

This study uses firms listed on the Indonesian Stock Exchange (IDX) from 2016 to 2019 as the sample. The final sample is 90 firms with 360 firm-years from the manufacturing sector in IDX. Table 1 panels A and B describe descriptive statistics for abnormal accruals and abnormal discretionary expense. We exclude outlier, and we obtain the final observation of 79 firms for accrual earnings management (316 firms-years observation) and 77 firms for real earnings management (308 firms-years observation).

Table 1. Descriptive Statistics

Panel A: Descriptive Statistic-Abnormal Accruals						
Characteristic CFO (Variabel <i>Dummy</i>)						
	N	Value 1		Value 0		
AK	316	204	64.6%%	112	35.4%	
Dependent Variables and Control Variables						
	N	Mean	Median	Max	Min	Stdev
SIZE (billion rupiah)	316	22.5219	21.2856	31.4309	12.0181	5.42027
ROA	316	0.0607	0.0390	1.6744	-0.3918	0.15573
LEV	316	0.4666	0.4645	1.0288	0.0012	0.28219
Earnings Management: ABNAC	332	1.0597	1.0298	2.5726	-0.3549	0.52267
Panel B: Descriptive Statistic-Abnormal Discretionary Expense						
Characteristic CFO (Variabel <i>Dummy</i>)						
	N	Value 1		Value 0		
AK	308	196	63.6%%	112	36.4%	
Dependent Variables and Control Variables						
	N	Mean	Median	Max	Min	Stdev
SIZE (billion rupiah)	316	22.6017		31.4309	12.4755	5.38132
ROA	316	0.0349	0.0390	1.6744	-0.3918	0.15573
LEV	316	0.4937	0.4645	1.0288	0.0012	0.28219
Earnings Management: ABDIEX	332	0.9758	1.0298	2.5726	-0.3549	0.52267
The Definition and measurements of the variables are presented in the previous.						

Table 1 shows that 64.6% of CFO have a background in accounting education with a mean firm size is 22.52, the average return on assets is 0.0607, and average leverage is 0.4666. Table 2 describes 63.6% of CFO who have had a background in accounting education. The average firm size is 22.60, ROA is 0.0349, and leverage is 0.4397.

Table 3. Abnormal Accrual Multiple and Accounting Education Background

	Prediction Signs	Coef.	t	sig.
(Constant)		1.406	10.411	0.000 ***
AK	+	0.196	3.423	0.001 ***
SIZE	-	-0.028	-5.455	0.000 ***
ROA	?	0.152	0.857	0.392
LEV	?	0.203	2.088	0.038 **
<i>Adj. R Square</i>				0.138
<i>F Statistics</i>				13.660 ***
Number of Observations				316

***, **, and * show a significant level at the level 1%, 5%, and 10%, respectively.

The Definition and measurements of the variables are presented in the previous.

Table 4. Abnormal Discretionary Expense and Accounting Education Background

	Prediction Signs	Coef.	t	Sig
(Constant)	0.542		4.470	0.000 ***
AK	+	0.107	2.115	0.035 ***
SIZE	-	-0.017	-3.830	0.000 ***
ROA	?	0.632	4.145	0.000 ***
LEV	?	0.111	2.066	0.040 **
<i>Adj. R Square</i>				0.096
<i>F Statistics</i>				9.135 ***
Number of Observations				308

***, **, and * * show a significant level at the level 1%, 5%, and 10%, respectively.

The Definition and measurements of the variables are presented in the previous.

Table 3 shows the Adjusted R Square 0.138. It show that CFO with accounting background and control variables (firm size, return on assets, and leverage) can explain the dependent variable (abnormal accrual) of 13.8%, and 86.2% is affected by different factors not saw in this investigation. Table 4 presents the Adjusted R Square 0.096 which explains that CFO with accounting background and control variables (firm size, return on assets, and leverage) can explain the dependent variable (abnormal discretionary expense) of 9.6%, while 90.4% is

affected by different factors not saw in this investigation. Furthermore, the results of the f-statistic test show the f-statistic value of 13.660 and 9.315 with a significance level of 1%. It indicates that the regression model can be used to predict abnormal discretionary expense or it can be concluded that the independent variable and control variable simultaneously and significantly affect the dependent variable.

Discussion

CFO accounting education background has a positive coefficient and affects abnormal accruals and abnormal discretionary expenses. These results support the hypothesis that predicts that accounting education background affects earnings management. This may be because, the number of CFOs who have a background in accounting education in the company is relatively large compared to CFOs who do not have an accounting education background, so the effect is significant. Based on the results of observations collected by researchers, 90 companies, only 55 companies have CFO with accounting education backgrounds.

A CFO who know in accounting or finance, this knowledge will be used to increase revenue and polish the company's financial statements. In addition, with their accounting knowledge, CFO can apply various methods to adjust company profits to achieve their anticipated targets. This is in line with research (Chiang et al., 2016) which states that accounting education background affects earnings management. Isidro and Gonçalves (2011) states that managers with accounting background studies are more prone to income smoothing.

The regression test results for the control variable show that size has an effect on earnings management with a negative coefficient of -0.028 for the abnormal accruals and -0.017 for abnormal discretionary expense. These results are in line with Vernando and Rakhman (2018) and Panjaitan and Muslih (2019). These results show that the bigger a company is, the smaller the earnings management will be. Because the bigger the company, the better the internal control, the more analysts who monitor, the more qualified audit committee, so it will likely reduce the ability of management to carry out earnings management. In addition, large companies pay more attention to the public and are considered to have reliable financial reports, so that these companies will report their financial reports carefully and more accurately, and companies have a responsibility to external parties for the financial statements that are presented, so that the tendency to doing earnings management will decrease (Panjaitan and Muslih, 2019).

The result of ROA (return on assets) does not affect on earnings management, which is proxied by abnormal accruals. These results are in line with the research of Astuti (2017) which shows that ROA does not affect on earnings management. Higher or lower ROA does not affect on earnings management. The higher the ROA indicates that the company is showing better performance so that shareholders will get increased profits. Therefore, the CFO who will benefit will not do earnings management.

Meanwhile, ROA has a significant effect with a positive coefficient of 0.632 on earnings management with a proxy *abnormal discretionary expense*. These results are in line with the research conducted by Prajitno and Vionita (2020) shows that ROA has a positive effect on earnings management. High ROA indicates an increase in profits at the company so that it will increase investor interest in the company. The higher the ROA, the higher the level of earnings

management. Because in addition to increasing interest in investors, the management as company manager expects a bigger bonus so that it will try to show its best performance to the owner by increasing company profits.

Leverage affects earnings management with a positive coefficient of 0.203 for abnormal accruals and 0.111 for the abnormal discretionary expense. These results are in line with research conducted by Puspitasari (2019) which indicates that leverage has a positive effect on earnings management. Companies with high debt levels tend to choose certain policies that aim to increase their profits. Companies that have a high leverage ratio, meaning that the proportion of debt is higher than the proportion of their assets, will tend to carry out earnings management. Thus, for companies that have a high debt ratio to fund assets by obtaining funds from investors and contract extensions, managers will carry out earnings management by setting a lower profit figure (A. Y. Astuti et al., 2017).

Conclusion

This study aims to examine the effect of the CFO accounting education background on earnings management. These results find CFO with an accounting education background has a positive coefficient and affects abnormal accrual and abnormal discretionary expense. This may be because, the number of CFO who has a background in accounting education in the company is relatively large compared to CFO who do not have an accounting education background, so the effect is significant. Based on descriptive statistics, we find 55 companies have CFO with accounting education backgrounds.

A CFO who know in accounting or finance, this knowledge will be used to increase revenue and polish the company's financial statements. In addition, with their accounting knowledge, CFO can apply various methods to adjust company profits to achieve their anticipated targets. This is in line with research (Chiang et al., 2016) which states that accounting education background affects earnings management. Isidro and Gonçalves (2011) which states that CFO with accounting background studies is more prone to income smoothing. These results expected that policymakers such as company management, investors, shareholders, and other stakeholders can consider the characteristics of the CFO as a party directly related to financial reports which will be related to the quality.

Practical Implications

This research is required to give recommendations to policy makers such as company management, investor actors, shareholders, and other stakeholders when hiring CFO to give additional attention because CFO can polish the company's financial statements based on their accounting knowledge. In addition, This research is required to give recommendations to regulators in terms of determining the qualifications or requirements to become a CFO, can consider the characteristics of the CFO as a party directly related to financial statements that will be related to the quality of financial reports such as the director's accounting education background finance. Because the quality of the characteristics of the CFO will assume a significant part in suppressing the occurrence of earnings management in a company.

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