

# Earnings Management, Business Strategy, and Business Complexity

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**ABSTRACT:** This study aims to analyze the effect of earnings management and business strategy on firm performance, which is moderated by business complexity. The object in this study was manufacturing companies listed on the Indonesia Stock Exchange (IDX) over the 2015-2018 period. Partial Least Square Structural Equation Modeling (PLS-SEM) was used in this study, and the results showed that earnings management had no significant effect, while business strategy had a significant positive effect on firm performance. Business complexity weakened the influence of earnings management on firm performance, while business complexity has not moderated the influence of business strategy on firm performance. The results of this study indicated that the determination of the right business strategy could improve firm performance instead of earnings management.

*Keywords:* Earnings management, business strategy, firm performance, business complexity.

## 1 INTRODUCTION

The purpose of the establishment of a firm is to maintain the viability of the firm, increase growth, and increase profits as well as maintain profits so that it looks stable from time to time (Windharta & Ahmar 2017). The firm management is required to pay attention to the firm's performance to make it improved and stable over time. However, in reality, the performance of firms listed on the Indonesia Stock Exchange (IDX) has fluctuated (Laila 2017).

Many factors affect firm performance, including earnings management and business strategy. This earnings information often becomes the target of management's engineering to make the firm's performance looks good. Earnings management also arises because of the agency relationship between the principal (shareholders) and agent (manager). In this connection, there is an information asymmetry where the agent has more information related to the actual condition of the firm than the principal. Agents and principals also have the same interests to maximize their welfare. This unification of interests raises agency problems/conflict agency (Jensen & Meckling 1976).

Akram et al. (2015) instead of Windharta & Ahmar (2017) study showed that earnings management has a significant negative effect on firm performance in Pakistan, while earnings management has no significant effect on firm performance in India. This happened because practicing earnings manipulation was a costly strategy as the increased or manipulated accruals should be offset by the amount of cash flows. So, in the long run, earnings management declines organizational performance because of the expense, i.e., the cost of capital got increased. India has greater market capitalization and a bigger firm size than Pakistan. According to Nelson et al. (2002) survey, sometimes auditors may ignore the earnings management of big clients, in other words, by large-sized firms. It is an explanation of why earnings management is not significant in India.

Santoso et al. (2017) study found that earnings management has no significant effect on firm performance. The practice of earnings management or the tendency to manipulate earnings can not affect firm performance because high firm performance (ROA) will reduce risk in earnings manipulation practices.

Strategies and tactics development aims to make the firm can compete in all circumstances (Jatmiko

2004). Porter's competitive advantage strategy is a method that can be done by companies to win the competition. Business strategy is the right tool in creating a competitive advantage. Companies that implement the right business strategy will win the competition with competitors and make an impact on firm performance.

Wibowo et al.(2017) study concluded that business differentiation strategy has a significant positive effect on firm performance. The firm carries out a differentiation strategy by making unique products aimed at increasing product sales to achieve predetermined profit achievements.

Bayraktar et al. (2016) study explained that the direct relationship between business strategy and cost leadership differentiation has no significant effect on firm performance. Innovation mediates the relationship between business strategy and leadership cost differentiation with firm performance. Firm managers must consider what the firm is doing to improve performance.

The complexity of business is considered the most significant challenge by many corporate managers in the 21st century (Queen & Fasipe 2015). Business complications can be seen as opportunities or obstacles to managing earnings. Companies that are still in a group with a complex corporate structure have an excellent opportunity to do earnings management because they have more flexibility and discretion tools compared to a single firm, for example, through the accrual component (Beuselinck & Deloof 2014). However, complex companies also have more control than a single firm. This control can reduce the earnings management behavior carried out by the agent.

The complexity of business can also help companies in implementing effective business strategies. With the available resources, the firm can create products that have high value for customers compared to competitors. In addition, the Firm will be able to reduce costs by ways such as building an efficient scale of facilities, minimizing sales costs through access to raw materials and good distribution chains, investing in efficient technology (R&D), and sharing costs and knowledge in an internal organization (Simu 2014).

## 2 RESEARCH METHODS

The research object in this study was manufacturing companies listed on the Indonesia Stock Exchange over the 2015-2018 period. The research sample consisted of 58 companies, with 232 years of observation. The purposive sampling method was

applied in this study. The criteria that used in this study were manufacturing companies listed on the Indonesia Stock Exchange, consistently reported financial statements, did not experience delisting and losses during the observation period, presented financial statements in rupiah, and all variables in the study are available in the financial statements. Partial Least Square Structural Equation Modeling (PLS-SEM) was used in this study.

The dependent variable in this study was the firm performance, as measured by the profitability ratio (ROA, ROE, NPM) (Brigham & Houston 2010). The independent variables in this study were earnings management and business strategy. Earnings management was measured by five models Healy (1985), DeAngelo (1986), Jones (1991), Dechow et al. (1995), and Kothari et al. (2005). Whereas, the business strategy was proxied as Premium Price Capacity with the gross margin formula divided by total sales revenues (Gani & Jermias 2006).

The moderating variable in this study was business complexity. The author follows Lee & Yeo (2016), namely the number of business segments, firm size, and proportion of intangible assets. The number of business segments follows Baker et al. (2012) where the number of subsidiaries owned by the parent is more than 50%, the size of the firm was proxied by LN Total Assets and the proportion of intangible assets was proxied by the number of tangible assets set divided by the total assets of the firm.

## 3 RESULTS AND DISCUSSIONS

Table 1 presents descriptive statistics about the variables used in this study.

Outer Model evaluation was carried out to determine the validity and reliability of indicators. Un-observed variables are variables that were tested on the outer model, while observed variables were not tested. The indicator of the unobserved variable used in this study was the reflective indicator. Indicator Reliability and Internal Consistency tests can be seen in Table 2.

Table 1. Descriptive Statistics

Variable	N	Min	Max	Mean	St.Dev	
Healy	232	-0.189	1.174	-0.003	0.104	
DeAngelo	232	-0.189	1.174	-0.003	0.104	
Jones	EM (X1)	232	-0.198	1.176	-0.001	0.104
Modified Jones Kothari		232	-0.476	1.195	0.003	0.115
PPC	BS (X2)	232	-0.167	1.183	0.012	0.104
Subsidiary		232	0.059	1.010	0.277	0.168
Size	BC (M)	232	0.000	27.000	4.655	5.709
Int/As		232	11.804	19.658	14.749	1.560
NPM	FP (Y)	232	0.000	0.153	0.009	0.025
ROA		232	0.117	190.092	8.532	13.821
ROE		232	0.028	92.100	8.564	9.430
Leverage	Con 1	232	0.035	224.459	14.294	20.276
Age	Con 2	232	0.076	4.547	0.777	0.697
		232	0.000	37.000	20.586	9.649

EM is earnings management; BS is business strategy; BC is business complexity; Con 1 and Con 2 is control 1 and control 2; PPC is premium price capacity; Subsidiary is the number of subsidiaries owned by the parent is more than 50%; Size is how big the firm is; Int/As is proportion of intangible assets; NPM is net profit margin; ROA is return of asset; ROE is return of equity; Leverage is a financial ratio indicating the relative proportion of shareholders' equity and debt used to finance a firm's assets; Age is how long has the company been listed on the Indonesia Stock Exchange.

Table 2. The Results of the Loading Factor and Composite Reliability

Indicator	Rule of Thumb	EM	BC	FP
Healy		0.990		
DeAngelo		0.990		
Jones	EM (X1)	0.979		
Modified Jones Kothari		0.948		
Subsidiary		> 0.7		0.860
Size	BC (M)		0.851	
Int/As			0.703	
NPM				0.938
ROA	FP (Y)			0.968
ROE				0.970
Parameter	Rule of Thumb	EM	BC	FP
Composite Reliability	> 0.7	0.992	0.848	0.972

Table 2 shows that all indicators used in this study have a loading factor and composite reliability value of > 0.7, which means that the model is fit in the test of the Indicator Reliability and Internal Con-

sistency Reliability. Table 3 presents convergent validity and discriminant validity in this study.

Table 3. The Results of Convergent Validity and Discriminant Validity.

Variable	Rule of Thumb	EM	BC	FP
EM	SQRT AVE > correlation	(0.980)	-0.043	0.541
BC		-0.043	(0.808)	0.038
FP		0.282	0.038	(0.959)
Parameter	Rule of Thumb	EM	BC	FP
Average Variance Extracted (AVE)	> 0.5	0.992	0.653	0.919

In the Discriminant Validity test, it can be seen that the value of AVE square of each variable is greater than the value of AVE square of other constructs. This means that the model fit in the Discriminant Validity test. In the Convergent Validity test, it can be seen that the AVE value of earnings management, business complexity, and firm performance > 0.5, which means that the model fit in the Convergent Validity test.

Table 4. The results of inner model test

Criteria	Rule of Thumb	Result	Remarks
Adjusted R <sup>2</sup>	≤ 0.70 (strong), ≤ 0.45 (moderate), ≤ 0.25 (weak)	64.50%	Strong
Average Path Coefficient (APC)	≤ 0.05	< 0.001	Acceptable
Average R-squared (ARS)	≤ 0.05	< 0.001	Acceptable
Average Adjusted R-squared (AARS)	≤ 0.05	< 0.001	Acceptable
Average Block VIF (AVIF)	Acceptable if ≤ 5, ideally ≤ 3.3	1.488	Acceptable
Average Full Collinearity VIF (AFVIF)	Acceptable if ≤ 5, ideally ≤ 3.3	1.401	Acceptable
Tenenhaus GoF (GoF)	≥ 0.10 (small), ≥ 0.25 (medium), ≥ 0.36 (big)	0.748	Big
Sympson's Paradox Ratio (SPR)	Acceptable ≥ 0.7, ideally = 1	0.857	Acceptable
R-squared Contribution Ratio (RSCR)	Acceptable ≥ 0.9, ideally = 1	0.961	Acceptable
Statistical Suppression Ratio (SSR)	Acceptable ≥ 0.7, ideally = 1	1.000	Acceptable
Q2 Predictive relevance	Q2 > 0	0.620	The model has predictive relevance

In addition to the outer model test, this research also conducted an inner model test to see the goodness of fit of the research model. The inner model test results can be seen in Table 4.

The adjusted R<sup>2</sup> value in this study was 64.50% and included a strong category. This value means that 64.50% of the firm's performance variables can be explained by the variables of earnings management, business strategy, business complexity, leverage and age of the firm, while the remaining 35.50% is affected by other variables outside the model.

The inner model testing on the APC criteria until Q2 Predictive relevance found to be fully fulfilled so that it could be concluded that this research model is fit.

Table 5 presents the results of this study. It can be seen that the independent variables, moderate variable, and interaction between the independent and moderate variables in influencing the dependent variable partially.

Table 5. The Results of PLS-SEM.

Variable	Model 1	Model 2	Model 3	Model 4
EM	0.540*	0.522*	0.524*	-0.051
BS	0.280*	0.291*	0.287*	0.241*
BC			0.044	0.045
BC * EM				-0.756*
BC * BS				-0.042
Leverage		0.042	0.041	-0.027
Age		0.215*	0.217	0.165*
R-Squared	37.10%	41.90%	42.10%	65.60%
Adj. R-Squared	36.60%	40.90%	40.80%	64.50%

\*significant at 5%

This study is using 5 earnings management models as reflective indicators. In the first model, earnings management and business strategy had a significant positive effect on firm performance, with the value of R-Squared and Adj R-Squared are 37.10% and 36.60%, respectively. In the second model, earnings management, business strategy, and age had a significant positive effect on firm performance, while leverage had no significant effect on firm performance with the value of R-Squared and Adj. R-Squared are 41.90% and 40.90%, respectively. In the third model, earnings management and business strategy had a significant positive effect on firm performance, while business complexity, leverage, and age had no significant effect on firm performance with the value of R-Squared and Adj. R-Squared are 42.10% and 40.80%, respectively. In the fourth model, which uses all research variables, business strategy, and

age had a significant positive effect on firm performance. Business complexity weakens the influence of earnings management on firm performance while earnings management, business complexity, the interaction of business complexity and business strategy, and leverage had no significant influence on firm performance.

The authors conducted a test using Healy, DeAngelo, Jones, Modified Jones, and Kothari earnings management models, respectively, to see the comparison of the five earnings management models. The results showed that, by using any earnings management models, either Healy, DeAngelo, Jones, Modified Jones, Kothari, or refining the five models together obtained the same significant results as Table 5. These results indicate that any earnings management model will produce a consistent model. Based on the fourth model, the value of R-Squared and Adj R-Squared full model (using 5 models) were 65.60% and 64.50%, Healy models were 65.50% and 64.50%, DeAngelo models were 65.60% and 64.50%, Jones models were 66.00% and 64.90%, the Modified Jones model was 64.60% and 63.50%, and the Kothari model was 65.60% and 64.50%. It can be concluded that the Jones model produces the best model with the highest of R-Squared and Adj. R-Squared values. However, the authors are unable to explain the reasons related to this.

In the fourth model, earnings management had no significant effect on firm performance. Earnings management actions taken by managers in this study did not affect the firm's performance. This is because companies tend to focus on business strategies to improve firm performance rather than making profit management. The firm's earnings management will also make the firm's performance becomes biased. Though the information presented in the financial statements is very important because it reflects the firm's performance and is used as a reference in decision making. This result is consistent with Santoso et al. (2017), but is contrary to Akram et al. (2015) instead of Windharta & Ahmar (2017).

The business strategy had a significant positive effect on firm performance. This proves that a firm that implements the right business strategy will win the competition with competitors and create high profits so that it has an impact on firm performance. This result is consistent with Wibowo et al. (2017), but is contrary to Bayraktar et al. (2016).

Business complexity weakened the influence of earnings management on firm performance. In this case, more control in complex companies is able to reduce the earnings management behavior performed by the agent.

Business complexity also has not moderated the influence of business strategy on firm performance. In this case, business complexity is not an agent's consideration in determining the firm's operations. In fact, the firm tends to expand its business by forming business units or establishing subsidiaries, so that the firm becomes more complex. However, a planned business strategy is sufficient to produce a better firm performance.

#### 4 CONCLUSION

Earnings management had no significant effect on firm performance, while business strategy had a significant effect on firm performance. Business complexity has weakened the influence of earnings management on firm performance, while business complexity has not moderated the influence of business strategy on firm performance.

Based on the results of this significance testing, it was found that the determination of the right business strategy is a vital thing to do by management compared to earnings management to improve firm performance.

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