

INTELLECTUAL CAPITAL AFFECTS EARNINGS QUALITY WITH EARNINGS MANAGEMENT AS INTERVENING VARIABLES

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Abstrak

Penelitian ini bertujuan untuk menguji pengaruh modal intelektual terhadap kualitas laba yang dimediasi oleh manajemen laba. Variabel yang ada dalam penelitian ini masing-masing diukur dengan Value Added Intellectual Capital (VAIC), Discretionary Accruals (DA), dan Real Earnings Management (REM). Objek penelitian ini adalah perusahaan manufaktur yang terdaftar di BEI secara berturut-turut pada tahun 2017-2020. Analisis data yang digunakan dalam penelitian ini adalah analisis regresi linear berganda dan analisis jalur. Hasil penelitian menunjukkan bahwa modal intelektual berpengaruh secara signifikan positif terhadap kualitas laba tetapi menjadi berpengaruh signifikan negatif terhadap kualitas laba bila dimediasi oleh manajemen laba. Penelitian ini diharapkan dapat bermanfaat bagi para perusahaan untuk menambah wawasan mengenai modal intelektual dan manajemen laba agar kualitas laba perusahaan dapat menjadi semakin berkualitas.

Kata Kunci: Kualitas Laba, Laporan Keuangan, Manajemen Laba, Modal Intelektual.

JEL Code: M20, M40, M41

Abstract

This study examines the effect of intellectual capital on earnings quality mediated by earnings management. The variables in this study were each measured by Value Added Intellectual Capital (VAIC), Discretionary Accruals (DA), and Real Earnings Management (REM). The object of this research is manufacturing companies listed on the IDX in a row in 2017-2020. The data analysis used in this study is multiple linear regression analysis and path analysis. The results show that intellectual capital has a significantly positive effect on earnings quality but becomes significantly negative on earnings quality when mediated by earning management. This research is expected to be useful for companies to add insight into intellectual capital and earnings management so that the earning quality of the company can become more qualified.

Key Words: Earning Quality, Financial Statement, Earning Management, Intellectual Capital.

JEL Code: M20, M40, M41

INTRODUCTION

Financial statements are one of the essential elements useful for a company's sustainability. PSAK 1 states that financial statements provide financial information to internal and external parties of the company to make economic decisions and as a result of management's responsibility for the use of resources that have been entrusted to the company ([Ikatan Akuntan Indonesia, 2019](#)). One of the final results produced by financial statements is profit/earnings. Profits reported in financial statements are always used as one of the performance evaluation criteria and determinants of company value. Many parties such as accountants, financial managers, stock market analysts, shareholders, and investors are also used, so the quality must also be good. Based on Statement of Financial Accounting Concepts (SFAC) 1, profit is essential information used to assess management performance, estimate the risks that may occur in the company, and estimate the ability of representative earnings in the long term ([Financial Accounting Standards Board, 2009](#)). Earnings quality is the quality of earnings information available in financial statements that can influence decisions made by investors and is helpful for investors to help assess the state of the company ([Anggraini, Sebrina, and Afriyenti, 2019](#)).

Intellectual capital is a collection of knowledge, skills, experience, intellectual property rights, communication systems, customer relationships, and brands helpful in increasing or providing value to the company ([Bontis, 1998](#)). Intellectual capital consists of three components, namely human/employee capital, structural capital, and customer capital ([Malinda & Rachmawati, 2020](#)). The three components influence each other so that if one of these components is low, the intellectual capital owned by the company will not be maximized ([Bontis, 1998](#)). High intellectual capital is believed to produce high-quality earnings because high intellectual capital will produce good performance so that it can generate good profits. However, if it still makes the company's performance less suitable, it can trigger management to carry out manipulations commonly referred to as earnings management ([Pramanda & Husnah, 2014](#)).

Earnings management is an action where the company's management intervenes in making financial statements that can change earnings information. Earnings management has four patterns: taking a bath, income minimization, income maximization, and income smooth. The more earnings management actions are taken; the company's quality of earnings will decrease. One example of an earnings management case is Garuda Indonesia, which recorded revenues not following the PSAK in force in 2019. During that period, Garuda Indonesia recorded a net profit of USD 809.85 thousand or Rp. 11.33 billion (exchange rate of Rp. 14,000) in contrast to the previous period's bookkeeping which recorded a loss of USD 216.5 million ([Kementerian Keuangan, 2019](#)).

This study was conducted to examine the influence of intellectual capital in the company on earnings quality with earnings management as an intervening variable. [Vernanda \(2019\)](#), who examined the relationship between intellectual capital and earnings quality, stated that intellectual capital has a positive relationship with earnings quality. If intellectual capital is high, the company's earnings quality is also high. These results contradict the research results conducted by [Indra and Trisnawati \(2019\)](#), which state that intellectual capital does not affect earnings quality. However, with earnings management as an intervening variable, intellectual capital significantly affects earnings quality.

Previous studies have inconsistent results that motivate researchers to investigate further the effect of intellectual capital on earnings quality with earnings management as an intervening variable. The population of this study is all manufacturing companies listed on the Indonesia Stock Exchange (IDX) in the 2017-2020 periods. [Rachmawati and Suwiji \(2016\)](#) found that manufacturing companies have higher intellectual capital than other industrial companies. Researchers used the 2017-2020 period for more profound and more precise observations and research with updated information. Based on this background, the purpose of this research is to test and analyze the influence of intellectual capital on the earnings quality of the company with earnings management as a mediator. The results of this study are expected to be beneficial for further researchers. They can add knowledge

and insight related to the influence of intellectual capital on the quality of corporate earnings with earnings management as a mediator. This research is expected to be useful for companies to add insight into intellectual capital and earnings management so that the earnings quality of the company can become more qualified.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Agency Theory

The results of the financial statements, which reflect the results of the company's management performance, can cause conflicts between management and shareholders because the two parties have different interests and goals. The difference in interests is in line with a theory called Agency Theory. Agency theory is a theory pioneered by [Jensen and Meckling in 1976](#). They liken the shareholders to principals and management as agents. This theory explains that the agency relationship is created when the principal employs an agent to perform a task and authorizes the party to make decisions ([Kalbuana, Yulistian, and Budi, 2020](#)). It is exemplified that the shareholders want the company to get the maximum profit possible. However, the management who understands the company's performance feels that the company cannot get the maximum profit. The differences in conditions and information between parties cause an imbalance of information (asymmetrical information) which can trigger the management to hide information from the shareholders.

Earnings Quality

One of the crucial information generated from financial statements is profit/earnings. Earnings reported in financial statements are always used as one of the performance evaluation criteria for determining company value. They are also used by many parties such as accountants, financial managers, stock market analysts, shareholders, and investors to make decisions regarding economic actions to be taken. Earnings quality is the quality of earnings information available in financial statements that can show its influence on decision making and can be used by investors to assess the company ([Anggraini, Sebrina, and Afriyenti, 2019](#)).

High earnings quality can also be generated from financial reports that accurately describe the company's operational activities. The more accurate the Information Company's operational activity, the higher the earnings quality ([Darabi, Rad, and Ghadiri, 2012](#)). Earnings quality can be measured using the Discretionary Accruals (DA) method. DA is the total accrual value minus the total assets/expenses recognized in the accounting system ([Ines, 2017](#)).

Earnings quality is also determined by how much intervention from the management in making financial reporting. Agency conflict between the principal and the agent can cause the management (agent) to intervene in financial reporting for their benefit and is referred to as earnings management. The more intervention from the management in the preparation of financial statements, the profit information that will be generated will be more inaccurate. This inaccurate information indicates low earnings quality ([Karim, Atikah, & Lenap, 2019](#)).

Intellectual Capital

Intellectual capital combines knowledge, skills, experience, intellectual property rights, communication systems, customer relationships, and brands helpful in increasing or providing value to the company ([Bontis, 1998](#)). High intellectual capital can help companies achieve a competitive advantage and provide more value to the company ([Malinda and Rachmawati, 2020](#)).

Intellectual capital can be measured in two ways: Value Added Intellectual Coefficient (VAIC) and Content Analysis (CA). The VAIC measurement is used to measure intellectual capital quantitatively through financial reports by looking for added value created by the company's tangible and intangible assets. The greater the added value generated by the company through its assets, the higher the value of the company's intellectual capital. CA is used to measure intellectual capital qualitatively through observation and analysis of a document that will produce documentary data.

The more components of intellectual capital appear in documentary data, the higher the value of a company's intellectual capital ([Rachmawati & Suwiji, 2016](#)).

Intellectual capital has three parts: human/employee capital, structural capital, and customer capital. Human capital is the main element of intellectual capital because it combines knowledge and ability to achieve a competitive advantage, influenced by four factors: genetic inheritance, education, experience, and employee attitudes ([Rachmawati & Suwiji, 2016](#)). Structural capital is all sources of knowledge other than humans in the company that support employees to produce maximum performance, such as business strategies and company procedures and regulations. Customer capital is all elements in the environment outside the company (external), such as markets, customers, suppliers, and the government. These three elements complement each other so that if one element is lacking, intellectual capital will not be maximized.

Earnings Management

Earnings management is an action that is intentionally taken by management to increase, decrease, or even out profit information in the financial statements to achieve specific goals ([Indra & Trisnawati, 2020](#)). The greater the intervention of the management in manipulating the earnings information in the financial statements, the lower the earnings quality will be.

Earnings management actions usually have four patterns: taking oversized baths, income minimization, income maximization, and income smoothing ([Ghazali, Shafie, and Sanusi, 2015](#)). Taking a bath is usually done by companies changing directors by recognizing future expenses in the current period, which causes future profits to soar because previous expenses have been recognized in the previous period. Management usually uses income minimization to reduce the tax burden imposed in the current period by increasing expenses in certain sections. In contrast, income maximization is usually done by accelerating the recording of income so that profits in the current period increase to attract investors. Income smooth is the act of smoothing profits that makes the company look consistent or stable ([Scott, 2015](#)).

Earnings management can be measured in two ways: Accrual Earnings Management (AEM) and Real Earnings Management (REM). The AEM method is almost the same as the DA method. In contrast, the REM method measures earnings management by looking for unreasonable values of operating cash flows, production expenses, and company discretionary expenses. Discretionary expenses are not mandatory expenses and usually arise due to company policies, for example, research and development expenses, maintenance expenses, and advertising expenses ([Noto, 2019](#)).

The Effect of Intellectual Capital on the Quality of Company Earnings

Agency theory states that the relationship between the principal and the agent can lead to information asymmetry, which can then trigger management to conceal information. This action will not occur if the company has high intellectual capital. As explained earlier that intellectual capital is a collection of information that can increase or create value for the company. Therefore, the more collections of information and knowledge possessed the more influential the company's management performance. The more information processed and owned by the management will indirectly result in good performance compared to management which has a collection of less information. The management with high intellectual capital makes them have good performance to generate significant profits for the company ([Pramanda & Husnah, 2014](#)). Therefore, the first hypothesis in this study is:

H1. Intellectual capital has a positive effect on earnings quality.

The Effect of Intellectual Capital on the Earnings Management

High intellectual capital indicates that the company processes its resources well to have a competitive advantage. In addition, high intellectual capital also indicates that the company has added value compared to its competitors. These two things conclude that high intellectual capital results in excellent and satisfactory company performance. However, even though the company's performance

is good, it does not always produce a satisfactory final result (profit), which can trigger the company, especially the management, to intervene in preparing financial statements, known as earnings management ([Wato, 2016](#)).

Those statements are in accordance with Agency Theory, which states that the relationship between principals (shareholders) and agents (management) results in information asymmetry. This information asymmetry is caused by the management having more information related to the company's operational performance and directly managing the company. The collection of information owned by the management is more than the shareholders, indicating that the intellectual capital owned is higher. The higher intellectual capital makes it easier for management to manipulate information for its own sake, namely by earnings management actions. Supported by high intellectual capital causes more earnings management actions taken by management ([Wato, 2016](#)). High intellectual capital indicates that the company, especially the management, is getting more innovative in managing its information. Therefore, the second hypothesis in this study is:

H2. Intellectual capital has a positive effect on earnings management.

The Effect of Earnings Management on the Quality of Company Earnings

Earnings management is the act of lowering, increasing, or leveling profit information in financial statements to achieve specific goals ([Indra & Trisnawati, 2020](#)). The intervention from the management causes the results of the financial statements to be irrelevant and inaccurate according to the company's condition. The management's earnings management actions can be caused because they have more information than the shareholders regarding the company's operational performance. This extra information also arises due to differences in responsibilities and duties between management and shareholders. This statement is supported by Agency Theory which states that the relationship between shareholders and management causes information asymmetry. Information asymmetry can make it easier for management to carry out earnings management which can later make the quality of financial reports low. If the quality of financial reports is low, earnings will also be low ([Pramanda & Husnah, 2014](#)). Therefore, the third hypothesis in this study is:

H3. Earnings management has a negative effect on earnings quality.

The Effect of Intellectual Capital on Earnings Quality with Earnings Management as Intervening

One of the vital information generated from financial statements is profit/earnings. The quality of the earnings information contained in the financial statements is influenced by many things, including intellectual capital and earnings management. High intellectual capital will make earnings quality high, while earnings management will make the value of earnings quality low. The declining or low earnings quality is caused by management interfering in preparing financial reports, which makes the financial statements inaccurate in describing the company's financial condition ([Karim, Atikah, and Lenap, 2019](#)).

Management intervention in the preparation of financial statements can be caused by several things, namely unsatisfactory profit results or wanting to take advantage of them. The high value of intellectual capital owned by the management does not always guarantee that the profits generated will be satisfactory. Maintaining satisfaction can motivate management to hide information related to the company's financial condition. In addition, the shareholders usually assess the performance of management through the amount of profit or profits earned. It can also motivate management to get the maximum profit to get big rewards even though it has to do earnings management ([Karim, Atikah, and Lenap, 2019](#)). This explanation is in line with Agency Theory which concludes that the agent can have its interests and sacrifice the principal's interests. The opposite need is due to information asymmetry, which is then used by the management. Management with high intellectual capital can easily carry out earnings management, which will later lower the quality of the profits generated. Therefore, the third hypothesis in this study is:

H4. Intellectual capital has a negative effect on earnings quality with earnings management intervening

RESEARCH METHOD

Data Selection and Method of Collecting Data

The type of data used in this study is secondary data in quantitative data taken from the annual financial statements of manufacturing companies listed on the Indonesia Stock Exchange (IDX) in the 2017-2020 period. The source of data used in this study was obtained from the official website of the IDX (www.idx.co.id).

The data collection method used in this research is documentation. Documentation is carried out by collecting and retrieving the necessary information in the financial statements of manufacturing companies listed on the Indonesia Stock Exchange (IDX) in the 2017-2020 periods. Samples taken from the population were taken using a purposive sampling technique, namely selecting samples with specific criteria. The criteria for selecting the sample to be used are as follows:

1. Manufacturing companies listed on the IDX consecutively from 2017 to 2020.
2. Companies that do not carry out a merger, delisting, and relisting processes in 2017-2020.
3. Companies that issue audited financial statement in 2017-2020.
4. Companies that use Rupiah (Rp) in financial statement in 2017-2020.
5. Companies that always generate profits in the 2017-2020 annual financial statements

Operational Variable Definition and Measurement

The following are the variables used in this study:

1. Dependent variable, namely earnings quality
2. Independent variable, namely intellectual capital
3. Intervening variable, namely earnings management

The following is an operational definition along with measurements of the variables in this study:

1. Earnings Quality

Earnings quality is the quality of earnings information contained in financial statements that can influence decision-making and can be used by investors to assess the company ([Anggraini, Sebrina, and Afriyenti, 2019](#)). Earnings quality in this study is measured by Discretionary Accruals (DA) based on the modified Jones model. DA is the remainder of the total accrual value after deducting the total assets/expenses recognized in the accounting system ([Ines, 2017](#)). The higher the value of DA, the quality of the profit generated will decrease. The following are the steps to measure discretionary accruals ([Suyono, 2017](#)):

a) Calculating Total Accrual (TAC)

$$TAC = NI_{it} - CFO_{it} \dots \dots \dots (1)$$

Description:

- NI_{it} = Net Income of company i in period t
- CFO_{it} = Cash Flow Operation of a company i in period t

b) Calculating the Total Accrual value using the Ordinary Least Square (OLS) method

$$\frac{TA_{it}}{A_{it-1}} = \beta_1 \left(\frac{1}{A_{it-1}} \right) + \beta_2 \left(\frac{\Delta Rev_{it}}{A_{it-1}} \right) + \beta_3 \left(\frac{PPE_{it}}{A_{it-1}} \right) + \epsilon \dots \dots \dots (2)$$

Description:

- TA_{it} = Total Accrual of a company i in period t
- A_{it-1} = Total Asset of a company i in period t-1
- β_{1-3} = Regression coefficient
- ΔRev_{it} = Revenue of company i in year t is reduced by Revenue of company i in year t-1

PPE_{it} = Property, Plant, & Equipment of a company i in year t
 ΔRec_{it} = Receivables of a company i in period t reduced by Receivables of a company i in period t-1
 ε = error/residual

c) Calculating Non-Discretionary Accruals (NDA)

$$NDA_{it} = \beta_1 \left(\frac{1}{A_{it-1}} \right) + \beta_2 \left(\frac{\Delta Rev_{it}}{A_{it-1}} - \frac{\Delta Rec_{it}}{A_{it-1}} \right) + \beta_3 \left(\frac{PPE_{it}}{A_{it-1}} \right) \dots\dots\dots(3)$$

d) Calculating Discretionary Accruals (DA)

$$DA_{it} = \frac{TA_{it}}{A_{it-1}} - NDA_{it} \dots\dots\dots(4)$$

2. Intellectual Capital

Intellectual capital combines knowledge, information, experience, intellectual property rights, communication systems, customer relations, and brands that are useful and capable of increasing or creating value for the company ([Kalbuana, Yulistian, and Budi, 2020](#)). This study measured intellectual capital using the Value-Added Intellectual Coefficient (VAIC). VAIC is the sum of the elements of intellectual capital, namely human/employee capital, structural capital, and customer capital. The higher the value of VAIC, the higher the value of intellectual capital owned by the company. The following are the steps for measuring VAIC: ([Ermawati, 2017](#))

a) Calculating Value Added (VA)

$$VA = OP + EC + D + A \dots\dots\dots(5)$$

Description:

OP = Operational Profit
 EC = Employee Cost
 D = Depreciation
 A = Amortization

b) Calculating Value Added of Capital Employed (VACA)

$$VACA = VA / CE \dots\dots\dots(6)$$

Description:

CE = Capital Employed

c) Calculating Human Capital Value Added (HCVA)

$$HCVA = VA / HC \dots\dots\dots(7)$$

Description:

HC = Human Capital

d) Calculating Structural Capital Value Added (SCVA)

$$SCVA = SC / VA \dots \dots \dots (8)$$

Description:

SC = Structured Capital (VA - HC)

e) Calculating Value Added Intellectual Coefficient (VAIC)

$$VAIC^{TM} = VACA + HCVA + SCVA \dots \dots \dots (9)$$

3. Earnings Management

Earnings management is a decision taken by the management to increase, decrease, or level the profit information in the financial statements to achieve specific goals ([Indra & Trisnawati, 2020](#)). Earnings management in this study was measured using Real Earnings Management (REM). REM is profit manipulation through the company's operational activities that can directly affect the company's cash flow. The following are the stages of measuring Real Earnings Management (REM): ([Darmawan, Sutrisno, and Mardiaty, 2019](#))

a) Calculating Abnormal Cash Flow from Operation (ACFO)

$$\frac{CFO_t}{A_{t-1}} = \alpha_0 + \beta_1 \left(\frac{1}{A_{t-1}} \right) + \beta_2 \left(\frac{S_t}{A_{t-1}} \right) + \beta_3 \left(\frac{\Delta S_t}{A_{t-1}} \right) + \epsilon_t \dots \dots \dots (10)$$

Description:

CFO_t = Cash Flow from Operation of company in period t
 A_{t-1} = Total Assets of company in period t-1
 α₀ = Constanta
 β₁₋₃ = Regression coefficient
 S_t = Total Sales of company in period t
 ΔS_t = Revenue of company in period t reduced by Revenue of company in period t-1
 ε_t = Error

b) Calculating Abnormal Production Cost (APROD)

$$\frac{PROD_t}{A_{t-1}} = \alpha_0 + \beta_1 \left(\frac{1}{A_{t-1}} \right) + \beta_2 \left(\frac{S_t}{A_{t-1}} \right) + \beta_3 \left(\frac{\Delta S_t}{A_{t-1}} \right) + \beta_4 \left(\frac{\Delta S_{t-1}}{A_{t-1}} \right) + \epsilon_t \dots \dots \dots (11)$$

Description:

PROD_t = Production Cost
 ΔS_{t-1} = Revenue of company in period t-1 reduced by Revenue of company in period t-2

c) Calculating Abnormal Discretionary Expenses (ADISEXP)

$$\frac{DISEXP_t}{A_{t-1}} = \alpha_0 + \beta_1 \left(\frac{1}{A_{t-1}} \right) + \beta_2 \left(\frac{S_t}{A_{t-1}} \right) + \epsilon_t \dots \dots \dots (12)$$

Description:

DISEXP_t = Discretionary expenses (advertising expenses, selling expenses, general and administrative expenses, and maintenance expenses)

d) Calculating Real Earnings Management (REM)

$$REM = (ACFO \times -1) + APROD + (ADISEXP \times -1) \dots \dots \dots (13)$$

Research Model and Technique used for Analysis

The data analysis technique used in this research is multiple regression and path analysis. Data analysis will be carried out using the statistical application of IBM SPSS Statistics version 23. The analysis in this study consists of five stages, namely descriptive statistics, classical assumption tests, model feasibility tests, hypothesis testing, and path analysis ([Indra & Trisnawati, 2020](#)). The following is a regression equation models according to the hypothesis in this study.

$$EQ..... = \alpha + \beta_1 IC + \varepsilon \quad 1)$$

$$EM..... = \alpha + \beta_1 IC + \varepsilon \quad 2)$$

$$EQ..... = \alpha + \beta_2 EM + \varepsilon \quad 3)$$

$$EQ..... = \alpha + \beta_1 IC + \beta_2 EM + \varepsilon \quad 4)$$

Description:

- EM = Earnings Management
- IC = Intellectual Capital
- EQ = Earnings Quality
- α = Constanta
- $\beta_{1,2}$ = Regression Coefficient
- ε = Error

Research Model

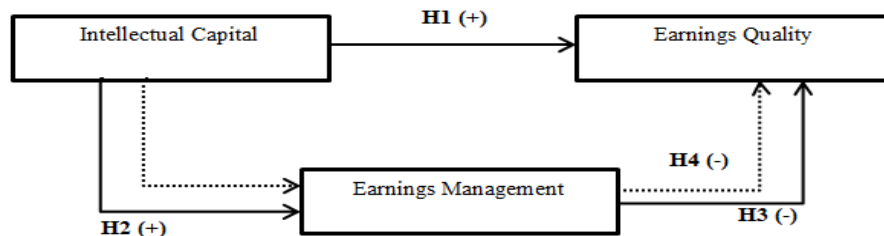


Figure 1. Research Model

Path Analysis

Path analysis is an analysis used to test and determine the direct effect of the independent variable on the dependent variable and the indirect effect of the independent variable on the dependent variable through the intervening variable. This analysis is carried out through four stages, namely:

1. Measuring the effect of the independent variable directly on the dependent variable.
2. Measuring the indirect effect of the independent variable on the dependent variable through the intervening variable
3. Summing up the results of the two previous analyzes.
4. Make conclusions.

The analysis stage is carried out using a regression equation model and then compared with the significant level. If the total analysis result is less than 0.05 (<0.05), it indicates that the independent variable has a direct or indirect effect on the dependent variable and vice versa ([Hamid, Sufi, and Konadi, 2020:144-150](#))

Result and Analysis

Overview of Research Objects

Table 1. Purposive Sampling Results

Description	Total
Population: manufacturing companies consecutively listed on the IDX in 2017-2020	160
Companies that do not meet the criteria:	
1. Companies that do not carry out a merger, delisting, and relisting processes in 2017-2020.	(7)
2. Companies that issue audited financial reports in 2017-2020.	(4)
3. Companies that use Rupiah (Rp) in financial reporting in 2017-2020.	(29)
4. Companies that always generate profits in the 2017-2020 annual financial statements.	(53)
Number of sample companies	67
Observation period (2017-2020)	4 years
Total sample before outlier	268
Outlier Data	(92)
Total sample After outlier	176

Table 2. Descriptive Statistics Result

Variable	N	Minimum	Maximum	Mean	Standard Deviation
Earnings Quality	176	0,102	2,004	0,583	0,415
Intellectual Capital	176	1,272	8,193	2,786	1,202
Earnings Management	176	-0,243	0,578	0,189	0,155

Model Feasibility Tests

1. Coefficient of Determination Test

Table 3. Coefficient of Determination Test Result

	R Square	Result
Regression Model 1	0,023	Passed the coefficient of determination test
Regression Model 2	0,022	Passed the coefficient of determination test
Regression Model 3	0,023	Passed the coefficient of determination test
Regression Model 4	0,052	Passed the coefficient of determination test

Table 3 shows the results of the coefficient of determination test for each regression model. Each model has an R square value between 0-1, indicating the data passed the coefficient of determination test.

2. F Test

Table 4. F Test Result

	Sig.	Result
Regression Model 1	0,045	Passed the F test
Regression Model 2	0,050	Passed the F test
Regression Model 3	0,043	Passed the F test
Regression Model 4	0,010	Passed the F test

Table 4 shows the results of the F test for each regression model. Each model has a significant value less than or equal to 0.05, indicating that the data is feasible to use.

Hypothesis Testing (t-test)

Table 5. t-test Result

	Beta	Sig.	Result	Result
Regression Model 1	0,052	0,045	Passed the t-test	Positive effect
Regression Model 2	-0,122	0,050	Passed the t-test	Negative effect
Regression Model 3	-0,408	0,043	Passed the t-test	Negative effect
Regression Model 4:				
Intellectual Capital	0,058	0,024	Passed the t-test	Positive effect
Earnings Management	-0,454	0,023	Passed the t-test	Negative effect

Table 5 shows the results of the T-test of each regression model, with all models having a significant value of less than or equal to 0.05, indicating that the variables influence each other, with each regression model having a positive/negative effect according to the value of beta.

Path Analysis

Path analysis was carried out in three stages: testing the independent variable's direct effect on the dependent variable, testing the indirect effect of the independent variable on the dependent variable through the mediating variable, and calculating the path coefficient. The first model is obtained from calculating the first stage of path analysis by examining the effect of intellectual capital on earnings management as the dependent variable. In contrast, the second model is obtained from the calculation of the second stage by examining the effect of intellectual capital and earnings management on earnings quality. The results of the first and second stages are written in tables 6 and 7 as follows:

Table 6. Results of the First Stage of Path Analysis

	Beta	R Square	Sig.
Intellectual Capital	-0,148	0,022	0,05

Table 7. Results of the Second Stage of Path Analysis

	Beta	R Square	Sig.
Intellectual Capital	0,169	0,052	0,024
Earnings Management	-0,170	0,052	0,023

The regression process carried out in the first and second stages resulted in the path coefficient values of each model, namely the first model of -0.148 and the second model of 0.169 and -0.170. The path coefficient values of the two models are used to calculate the direct or indirect effect of the independent variable on the dependent variable. The direct effect of -14.8% and the indirect effect of -2.8% were obtained from 0.169 x -0.170 x 100. Therefore, the effect of intellectual capital on earnings quality with earnings management as a mediator simultaneously is -17.6%. The influence between variables can be found by comparing the value of the F table and the calculated F. If the calculated F value is greater than the F table, then the effect of the independent variable is significant. The formula for calculated F is as follows:

$$F = \frac{(n - k - 1)(R^2_{x_i(x_1, x_2, \dots, x_k)})}{k(1 - R^2_{x_i(x_1, x_2, \dots, x_k)})} \dots\dots\dots(14)$$

Description:

- n = Amount of research data
- k = Independent variable

The value of the calculated F of the first and second models is 9.544 and 9.489, respectively, which is greater than the F table value of each model of 3.895, so it can be concluded that both models have a significant effect on the dependent variable. The positive or negative effect of the independent variable and the intervening variable on the dependent variable can be found by finding the value of the t count and comparing it with the value of the t table. If the value of the t count is greater than the t table, then the effect of the variable is positive, with the following formula:

$$t = \frac{\rho\sqrt{n-2}}{\sqrt{1-\rho^2}} \dots\dots\dots(15)$$

Description:

- P = Path coefficient
- n = Total research data

The values of the t-count of the first and second models are -1.822 and -0.013, respectively, smaller than the t-table value of each model of 1.973, so it can be concluded that intellectual capital has a negative effect on earnings quality mediated by earnings management.

The Effect of Intellectual Capital on the Quality of Company Earnings

Based on the results of hypothesis testing that has been carried out, it can be concluded that intellectual capital has a significantly positive effect on earnings. Intellectual capital is a collection of knowledge, information, experience, intellectual property rights, communication systems, customer relations, and everything valuable and capable of increasing or creating value for the company ([Bontis, 1998](#)). The test results show that intellectual capital positively influences the preparation of financial statements that will result in earnings quality. The greater the company's intellectual capital, the better the financial statements will be produced so that the quality of earnings from the financial statements is also getting better. Large intellectual capital indicates that the company has more added value and competitive advantages than other companies, resulting in good management performance. This good performance is reflected in the financial statements because the financial statements reflect the results of the management's performance in managing the company.

Good financial reports indicate that the information produced is also of good quality, one of which is profit. The higher the intellectual capital owned, the higher the quality of earnings generated in the financial statements. Agency theory explains that the agent, as the party given the delegation and responsibility by the principal, must manage the company as much as possible to optimize profits. The management, as the agent, will make maximum efforts to produce useful financial reports that will satisfy the shareholders as the principal. The results of this study are in line with research from [Darabi, Rad, and Ghadiri \(2012\)](#), which states that intellectual capital has a significant positive effect on earnings quality, so it can be concluded that there is a positive relationship between intellectual capital and earnings quality.

The Influence of Intellectual Capital on the Company's Earnings Management

Based on the results of hypothesis testing that has been carried out, it can be concluded that intellectual capital has a significantly negative effect on earnings management. Intellectual capital is part of the intangible assets within the company that can help companies achieve competitive advantage and provide added value ([Pramanda & Husnah, 2014](#)). The test results show that intellectual capital negatively influences earnings management actions carried out by company management, which means that the greater the intellectual capital owned by the company, the smaller or fewer earnings management actions taken by the company.

Large intellectual capital indicates that the company's added value and competitive advantage are also getting bigger, so these advantages cause the company's management performance to be

good because it has more added value than other companies. Good performance from high intellectual capital causes management earnings management to decrease because they no longer need to manipulate earnings information. Agency theory states that the shareholders employ the management to manage the company as well as possible following the contract they have. Management supported by intellectual capital will produce good performance results and can optimize profits without the need to take earnings management actions. The results of this study are in accordance with research from [Supatminingsih and Wicaksono \(2020\)](#), which states that intellectual capital negatively influences earnings management actions carried out by companies.

The Effect of Earnings Management on the Quality of Company Earnings

Based on the results of hypothesis testing that has been carried out, it can be concluded that earnings management has a significantly negative effect on earnings. Earnings management is an action taken to increase, decrease, or level the profit information in the financial statements to achieve specific goals ([Indra & Trisnawati, 2020](#)). The test results show that earnings management negatively influences the preparation of financial statements that will result in earnings quality. The more earnings management actions taken by the company's management; the quality of earnings generated by the company's financial statements is lower. Financial statements are made to show the company's financial condition to certain parties and produce various information, one of which is profit/earnings. Suppose earnings management actions manipulate the information from the financial statements. In that case, the financial statements cannot correctly describe the company's condition, so the description of the company's condition is increasingly inaccurate because the management has interfered in making financial statements.

Agency theory states that the relationship between the principal and the agent can lead to agency conflict. The conflict is caused because the agent has more information than the principal because he directly runs the company, so he uses it to achieve specific personal goals. The management, who wants to get as much reward as possible, does various ways to get maximum results, even through earnings management. These actions make the results of the financial statements inaccurate because they do not correctly reflect the state of the company, which has been manipulated. The results of this study are in line with research from [Sulaeman \(2019\)](#), which states that earnings management has a negative effect on the quality of company earnings.

The Effect of Intellectual Capital on Earnings Quality with Earnings Management as Mediating

Based on the results of hypothesis testing that has been carried out, it can be concluded that intellectual capital has a significantly negative effect on earnings quality mediated by earnings management. Intellectual capital is a collection of knowledge and everything valuable and capable of increasing or creating value for the company ([Bontis, 1998](#)). Earnings management is an action taken to increase, decrease, or level the profit information in the financial statements to achieve specific goals ([Indra & Trisnawati, 2020](#)). The test results show that intellectual capital mediated by earnings management negatively influences the preparation of financial statements, which will result in earnings quality. The greater or higher the value of intellectual capital owned by the company, the better, but if earnings management actions by the company influence it, the quality of the financial statements produced by the company will decrease, indicating that the quality of earnings from the financial statements is also decreasing in quality.

Intellectual capital supported by earnings management actions will decrease the quality of earnings. Agency theory states that the relationship between the agent and the principal causes information asymmetry, which becomes an agency conflict. This conflict causes earnings management to occur as a form of the agent taking advantage of the excess information he has compared to the principal. Even though the intellectual capital owned by the company is high, if management carries out earnings management, the quality of earnings from its financial statements will still decrease because it becomes increasingly inaccurate. The results of this study are in line with research from [Indra and Trisnawati \(2020\)](#), which states that intellectual capital has a negative effect

on earnings quality mediated by earnings management. The study using multiple regression analysis and path analysis found that an increase in intellectual capital will make earnings quality decrease by -0.104, so it can be concluded that the higher intellectual capital, the quality of earnings generated will be lower and decrease.

CONCLUSION

Based on the research that has been done, the conclusions that can be made in accordance with each formulation of the research problem are as follows:

1. Intellectual capital has a significant positive effect on earnings quality. This result is because the higher the value of intellectual capital owned by the company, the better the financial statements produced, indicating that the quality of earnings from these financial statements is also getting better because profit is one of the information produced by financial statements.
2. Intellectual capital has a significant negative effect on earnings management. The higher value of intellectual capital owned by the company indicates that the company's added value and competitive advantage are also higher, causing the company's management performance. These results are better so that earnings management actions taken by management will decrease because they no longer need to manipulate earnings information.
3. Earnings management has a significant negative effect on earnings quality. This result means The company's management takes more earnings management actions, and the quality of the earnings generated by the company's financial statements is getting lower. Because earnings management actions manipulate the information from the financial statements, the financial statements cannot describe the company's condition correctly and accurately. So that the quality of earnings decreases.
4. Intellectual capital significantly negatively affects earnings quality mediated by earnings management. This result is because earnings management actions reduce the quality of earnings in the financial statements so that the greater or higher the value of intellectual capital owned by the company and the action of earnings management will make the quality of the financial statements produced by the company decrease and deteriorate.

In conducting this research, the researcher found several limitations. This research uses only one measurement in measuring each variable and uses only one independent variable, not any control variables. The measurement of the earnings quality can be measured by market-based measurement like earnings response coefficient. Based on the limitations found and the conclusions of this study, the implication that researchers can give to future researchers is to be able to add other measurements in measuring all variables in order to produce more accurate results. Future researchers are expected to be able to add other new independent variables such as directors' compensation and use control variables such as company size and profitability. As for the company and stakeholders, this research can be used as a reference for interested parties both within and outside the company in making economic decisions.

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