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The Influence Of Leverage, Earnings Persistence, And Firm Size On Earnings Responses Coeffient In Infrastructure Companies At Bei 2018 – 2021

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Abstract

The aim of this research is to examine the leverage, earnings persistence and firm size on the earnings response coefficient (ERC) in infrastructure companies listed in Indonesia Stock Exchange. This research used 16 listed infrastructure companies in Indonesia Stock Exchange, selected using purposive sampling method, during the research period 2018 until 2021. Data were analyzed using panel data regression method. The result of the analysis indicated that leverage, earnings persistence does not have a negative effect on the earnings response coefficient (ERC), firm size has a positive effect on the earnings response coefficient. Companies that have a large number of assets are large companies that are considered to have less risk, because large companies are considered to have more access to capital, so that the company has the flexibility and ability to obtain funds.

Keywords: leverage, earnings persistence and firm size

INTRODUCTION

Financial reports published annually are reports on the state of a company. Financial reports are utilized for interested parties, including creditors, investors, and other outside parties who can assist decision making (IAI, 2018: 145). There are five types of financial reports, including income statements, reports on changes in equity, statements of financial position , statements of cash flows, as well as notes to financial statements. The income statement is a report that is of concern to stakeholders

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because it is useful for evaluating the performance of a company that will occur in the future, and is useful for assessing the uncertainty of risks that exist in future cash flows (Keiso, Weygandt, & Waarfiled, 2018: 7) .

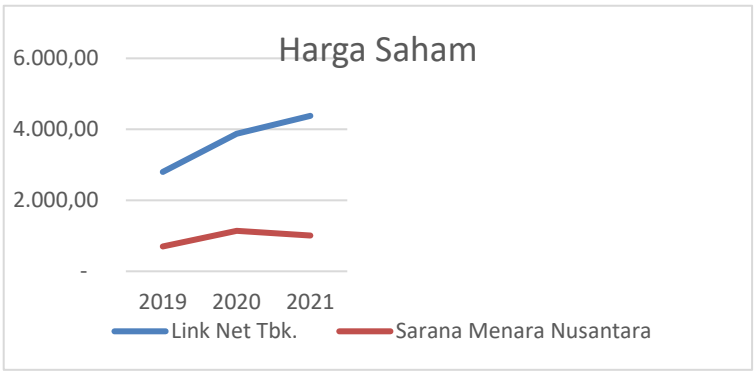
The company's profit in a certain period of time is one of the performance measurement indicators that can be seen from the financial statements. External parties, especially investors, will pay attention to company profits that increase from period to period. Investors will be more selective in making investment decisions due to the conditions experienced by the IDX (Sandi, 2013). Febrianto and Widiastuty (2005) proved that there is a very close relationship between company profits and stock returns in one direction. The magnitude that shows the measurement of the strength of the relationship between stock returns and company profits is called the earnings response coefficient. Research on earnings response coefficients is useful in fundamental analysis by investors where the research model is used to determine market reactions to a company's earnings information (Susanto, 2012).

Profit information that has been published by the company provides two possibilities that will occur, namely good news and bad news. Good news when the company provides news that the profit earned for the year in question is higher than the previous year's profit, otherwise bad news when the profit news given is lower than the previous year's profit. In this regard, the profit information provided by the company can cause a market reaction (Fitriah, 2020). The resulting market reaction can be calculated using the Earnings Response Coefficient (ERC).

This research phenomenon occurs in infrastructure companies, such as PT Link Net Tbk, explaining that infrastructure companies will experience a decrease in profits in 2021 and Pt Sarana Menara Nusantara Tbk will experience an increase in profits for 3 years. The decline in profits that occurs investors will give a negative response. The following is data and pictures that explain the relationship between company profits and stock prices.

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PT LinkNet Tbk	
Year	Profit
2019	894,531
2020	941,707
2021	885,319
PT Sarana Menara Nusantara	
2019	2,353,089
2020	2,853,617
2021	3,447,875

***Figure 1:* Stock Price (yahoo finance.com) and Annual Profit (IDX.com)**

Figure 1. describes the phenomenon that occurs when PT Link Net Tbk. has experienced a significant increase in share prices for 2 consecutive years, namely from 2019 to 2020. This was due to profits from PT Link Net Tbk and experienced a significant increase so as to get a positive response from investors. In 2021 the profit generated by PT Link Net Tbk has decreased but PT Link Net Tbk can increase its share price, this will get a positive response from investors. The positive response given shows that investors will think that PT Link Net Tbk, even though it is experiencing a decline in profits, is always able to provide the desired level of return on the investment that has been made. This phenomenon is data that has the character of good news which illustrates the value of a high earnings response coefficient. This good thing is not the same as that felt by PT Sarana Menara Nusantara Tbk. This industry is facing a situation that is inversely proportional to PT Link Net Tbk, where PT Sarana Menara Nusantara Tbk's profits have increased in the last 3 consecutive years but this has not been accompanied by its share price. In 2021 PT Sarana Menara Nusantara Tbk. faced a decline in its share price. Regarding the matters described above, PT Sarana Menara Nusantara Tbk received a negative response to the share price of the industry. This is because investors want to think that PT Sarana Menara Nusantara Tbk is unable to provide the desired level of return on the investment that has been made. This phenomenon becomes data with the character of bad news which illustrates the low earnings response coefficient.

The phenomenon of increasing profits is not always accompanied by a positive stock price transformation, which means that stock prices are experiencing growth, and vice versa, when profits decrease, the stock price is not always accompanied by a decline. This shows that investors, creditors, and other stakeholders do not only view

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profit data as the basic essence of making financial decisions, but there are other data (Mulyani, Asik, and Andayani, 2007).

The factors that affect the difference in earnings response coefficient (ERC) between one industry and another industry (Scott, 2009) are systematic risk as measured using beta, capital structure or leverage, earnings persistence (earning quality) which are used as indicators of earnings quality, growth opportunities, the similarity of investor expectations, as well as the informativeness of price which is generally proxied by using firm size. This research is focused on the influence of leverage, earnings persistence, and firm size.

Leverage is the use of assets and sources of funds by industries that have fixed costs with the aim of increasing the potential profits of shareholders. Financial leverage displays the proportion of using debt to finance investment (Agus, 2001). Dhaliwal, et al (1991) in Scott (2009) shows that leverage is negatively related to ERC. Companies with large levels of leverage mean that they have greater debt than capital, so if there is an increase in profit, the debtholders will be the beneficiaries (Sri and Nur, 2007). Companies that have large leverage, profits will flow more to creditors so that good news on profits will be given to creditors rather than shareholders. Data on earnings announcements was reacted quickly by creditors,

According to Pennman (1982) in Margaretta (2006) earnings persistence is an improvement in expected future earnings which is implied by current year accounting profits. Kormendi and Lipe (1987) in Margaretta (2006) formulate that the earnings reaction coefficient is positively correlated with earnings persistence. The greater the earnings persistence, the greater the earnings response coefficient (ERC). Earnings persistence reflects the quality of the company's earnings and shows that the company can maintain profits from time to time and not just because of a certain event. Scott (2009) said that the higher the turnover, the higher the earnings response coefficient (ERC). This shows that the profit earned by the company can increase.

Firm size is a scale where the size of the company can be classified according to various methods, including revenue size, total assets, and total capital (Brigham, 2006). Firm size is a proxy for price informativeness. The company continues to grow big so that there continues to be a lot of public data that affects the company. This is because large companies have greater reporting responsibility and appear more frequently in news and mass media than small companies. With so much data available on large companies, it will be easier for investors to interpret the data so that they can reduce the uncertainty of the company's future cash flows and will have more confidence in large industries. It can be concluded that the larger the size of a company, the higher the earnings response coefficient. Khoerul Umam Sandi Research (2013) Firm size has a positive effect on the earnings response coefficient.

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Research on earnings response coefficient – ERC (earnings reaction coefficient) has been tried many times and has different research results.

This study examines the effect of Leverage, Earning Persistence, and Firm Size on ERC. It is hoped that this research will be useful in fundamental analysis by investors for decision making. This research was conducted at infrastructure sector companies listed on the Indonesia Stock Exchange (IDX).

LITERATURE REVIEW

Capital Market Efficiency Theory

Efficient capital market theory is related to research on earnings response coefficients. Efficient capital market theory, according to Scott (2012: 110), argues that security market prices reflect all available information about these securities.This study tests the efficient capital market theory because the Earnings Response Coefficient shows how much influence financial information is reflected in security prices.

Signaling Theory

Jaswadi (2004) confirms that signaling theory Assessing the presence of confidential information indicating that the company's value is higher than the current stock price is one of the accounting functions. One of the signals in collecting available information for market capital is accounting profit which is disclosed through financial reports. Suwardjono (2017: 490). The manager's effort to increase shareholder wealth is to provide positive news to the market to increase share prices. To transfer news, managers can disclose directly (Jaswadi, 2004).

Earnings Response Coefficient

Scott (2015: 163) Earning Response Coefficient (ERC) measures how much abnormal stock returns are in response to unexpected earnings reported by companies in issuing these securities.Meanwhile, ERC is "Sensitivity of stock returns to every rupiah profit or surprise profit" according to Suwardjono (2017: 493). The earnings response coefficient according to Paramita and Hidayanti (2013) is the investor's response to the company's reported earnings.This reaction reflects the response to the quality of the company's reported earnings.. The strength of the response as seen in the positive or negative news contained in earnings is a major factor in determining whether the ERC is high or low.

X1 Theory (Leverage)

Leverage is the use of assets and sources of funds by companies that have fixed costs with the intention of increasing the potential profits of shareholders (Agus,

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2001). Meanwhile, according to Suad (2008), leverage is the power of the lever, which comes from the word lever which means lever.

Leverage is usually used to describe a company's ability to use assets or funds that have fixed costs to increase the level of income for company owners. By increasing the level of leverage, this will mean that the level of uncertainty of the return to be obtained will also be higher. This level of leverage may vary from one company to another, or from one period to another within one company. The higher the level of leverage, the higher the level of risk faced and the greater the expected rate of return or income. Risk here is meant by uncertainty in relation to the company's ability to pay its fixed obligations (Lukman, 2009).

There are 2 types of leverage (Suad, 2005):

1. Operating Leverage
   Is the company's ability to use fixed operating costs to enlarge the effect of changes in sales volume on EBIT. This operating leverage occurs when the company bears fixed costs that must be covered from operating results.
2. Financial Leverage
   Is the use of sources of funds that have a fixed burden in the hope that it will provide additional profits that are greater than the fixed costs so that it will increase the profits available to shareholders (Agus, 2001). Financial Leverage occurs when a company uses a source of funds that creates a fixed burden.

Companies use operating and financial leverage with the aim that the profit earned are greater than the cost of assets and sources of funds, thereby increasing shareholder profits. Conversely, leverage also increases the variability (risk) of profits, because if the company turns out to get a lower profit than its fixed costs, the use of leverage will reduce shareholder profits (Agus, 2001).

Financial leverage shows the proportion of using debt to finance investment. Companies that do not use leverage means using 100% of their own capital (Agus, 2001). The use of debt itself for the company contains three dimensions:

1. lenders focus on the amount of collateral for the credit given,
2. by using debt, if the company gets a profit that is greater than its fixed expenses, the company owner's profits will increase, and
3. By using debt, the owner obtains funds and does not lose control of the company.

Brigham (2008) says that the use of debt at a certain level will reduce the company's cost of capital because the cost of debt is a deduction from corporate tax and increases stock prices. So that it can be said that the use of debt at a certain level and used effectively and efficiently will increase the value of the company. But if it is

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used excessively, it causes the company to have a high risk of bankruptcy due to the inability to pay off its debts.

Leverage can also be used to measure the solvency level of a company which shows the company's ability to fulfill all of its financial obligations, both long term and short term (Agnes, 2005). Various financial ratios that can be used to measure risk in relation to companies that use leverage in their capital structure are as follows:

1. Debt Ratio (Debt Ratio)
2. Debt to Equity Ratio (Debt to Equity Ratio)
3. Profit to interest expense ratio (Time Interest Earned)
4. Fixed charge coverage ratio

In this study, the authors use the measurement of the debt to equity ratio (DER) which describes the ratio of debt and equity (own capital) in the company's capital structure. If DER > 1 indicates that the company is loaded with debt where the debt portion in its capital structure exceeds the equity portion (Noor, 2009) or vice versa, if DER < 1 indicates that the debt portion in the capital structure is less than the equity portion. Can be determined by the formula:

$$\boldsymbol{DER} = \frac{Total\ Liabilities}{Total\ Equity}$$

This measurement is in accordance with research conducted by Novianty and Erny (2008) by comparing the company's total debt at the end of the period divided by the company's total equity at the end of the period.

Theory X2 (Earning Persistence)

Every company wants profit or often referred to as profit (profit). Profit is needed by the company to be able to carry on the life of the company. According to Soemarso (2005), profit is the difference in excess of income over expenses in connection with business activities. On the basis of persistence, quality profit is profit that is permanent and not transitory.

Earning persistence is a component of the predictive value of earnings in determining earnings quality, and earnings persistence is determined by the accruals and cash flow components of current earnings, which represent the transitory and permanent nature of earnings (Sloan in Nicky, 2009).

According to Pennman (1982) in Margaretta (2006) earnings persistence is a revision in accounting profit that is expected in the future (expected future earnings) which is implied by current year accounting profit (current earnings). According to Sunarto (2010) earnings persistence is profit that has the ability to be an indicator of

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future earnings generated by the company repeatedly. Profit is said to be persistent, if current profit can be used as a measure of future profit.

Lipe (1990) uses the regression coefficient of the regression between accounting earnings for the current period and the previous period as a proxy for earnings persistence. Profit is considered to be more persistent, if the coefficient of variation is smaller.

It can be concluded that earnings persistence is the current earnings ability which is expected to be able to explain future earnings. Persistence can be seen based on the overall financial statements or measured based on the components of the financial statements.

Profits that fluctuate (not persistent) will reduce the predictive power of earnings to predict the company's cash flow in the future. A decrease in the predictive power of earnings can result in current year earnings information being less useful in predicting future earnings (Suaryana in Festy, 2011). Persistence according to Ramakrishnan and Thomas (1998) in Scoot (2009) is divided into 3 different components as follows:

a) The permanent component is expected to last forever (expect to persist indefinitely). Have high persistence (ERC more than 1). This means that the company announces that it has succeeded in developing a new product. The company managed to find a method to increase efficiency. Good news will be reacted by the market more than 1 because it is hoped that future net income will be bigger.
b) The transitory component affects profit in the current year, but has no effect on the future. Has a persistence of 1 (ERC is 1). This means that the company announces good news with an increase in net income caused by profits from the sale of fixed assets or the termination of a business activity. This is not reacted by investors because there is no reason to expect profits like this to be repeated.
c) Price irrelevant, has no persistence at all. Has a persistence of 0 (ERC is 0). The company announces good news by increasing net income due to changes in the accounting method used by the company, for example the company capitalizes organizational costs or promotion costs. There is no reason for the market to react to this good news.

If there is a large persistence in the company's profits, the expectation of future profits will be more certain than if the company has a low persistence (Sri, 2008). To measure the persistence of earnings in this study, the authors used the formula according to Persada (2010) in Salsabila, Pratomo, and Nurbaiti (2016), namely by way of EBT in the previous year different from EBT profits in. now, then divided by total assets. Here's the Earning Persistence formula:

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$$\text{Earning Persistence} = \frac{\text{Profit before tax } \boldsymbol{t-1} - \text{Profit before tax } \boldsymbol{t}}{\text{Total Asset}}$$

Theory X3 (Firm Size)

According to Jogiyanto (2016) firm size is the size of the company which can be measured by the value of total assets or net sales or equity value. Meanwhile, according to Supriyono (2017) organizational size is how big an organization functions as a provider of economic benefits. According to

Jogiyanto (2016) stated that asset size is used to measure the size of the company, the asset size is measured as the logarithm of total assets. The value of total assets is usually very large compared to other financial variables, for that the asset variable is refined to Log Assets or Ln Total Assets.

Firm size = Ln (Total Assets)

Description: Ln = Natural Logarithm.

Research Hypothesis

Leverage Against Earnings Response Coefficient

Leverage is the utilization of resources by businesses with fixed costs in an effort to increase potential income for shareholders (Agus, 2010). Determining how much debt the organization uses is related to leverage. According to Dhaliwal et al (1991), the level of leverage has a negative relationship with the earnings response coefficient. A high level of leverage indicates that the company has more debt than capital. Therefore, debt holders will benefit if there is an increase in profits (Sri and Nur, 2007). When a company has a high level of leverage, more profits will be given to creditors than shareholders because creditors are more confident in the company's ability to repay their debts. and pay interest on the principal.

Creditors respond quickly to the release of earnings, while investors have a negative reaction because they believe corporations are prioritizing debt over dividend payments. As a result, companies with high debt levels will have a lower earnings response coefficient (ERC) than companies with low or no debt levels. Thus, debt holders will benefit if there is an increase in profits (Scott, 2009).

Harris and Raviv (1990) in Etty (2008), the amount of debt reflects the quality of the company and its unpromising future prospects. Increased profitability will improve the position and safety of bondholders over shareholders for businesses with significant debt.

In addition, the study of Moradi et al (2010). found that the ERC in a business with a low level of financial leverage will be higher than the ERC in a business with a

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high level of financial leverage. Information about increasing company profitability is very helpful for creditors of companies with high financial leverage. This is because knowledge of ways to increase profitability can increase a company's ability to repay its debts.Research by Merlin mayang sari, ratna wijayanti daniar, muchamad taufiq (2018) Leverage as measured using the debt to equity ratio has a positive effect on the earnings response coefficient (erc). Research Maisil and nelvirita (2013) leverage has no effect on earnings response coefficient (erc)

H1: Leverage has a negative effect on earnings response coefficient (ERC)

Earning Persistence Against Earnings Response Coefficient

Earnings persistence reveals the quality of a company's earnings and indicates that profits can be maintained over time and not just as a result of a single occurrence. According to Kormendi and Lipe (1987); Easton and Zmijweski (1989) in Sri and Nur (2007) state that the relationship between earnings persistence and earnings response coefficient is positive. Because this condition indicates that the profit earned by the company continues to increase, the more permanent the profit from time to time, the greater the profit coefficient.

According to Scott (2009), the earnings response coefficient is higher the longer earnings change over time (ERC). This shows that the company's profitability can continue to increase or remain stable in the future. Information that is expected to be constant in the long term is received by the market with greater enthusiasm than information about short-term earnings. When a new item is introduced, the market reacts more strongly to an earnings report than when a sale of fixed assets is reported.

Earnings response coefficient (ERC) and earnings persistence have a positive relationship, according to Margaretta (2006), who cites Collins and Khotari (1982). Consequently, the greater the earnings response coefficient, the more persistent the variation in earnings from year to year (ERC).

H2: Earnings persistence has a negative effect on earnings response coefficient (ERC)

Firm Size Against Earnings Response Coefficient

According to Mahendra and Wirama (2017), companies with large sizes are more comparable, stable and able to generate profits than businesses with smaller sizes. They also seem capable of consistently increasing the quality of their earnings. This is sure to attract investors and inspire them toinvest in companies that are able to generate profits. Therefore, investors will like big businesses that generate high profits. Because large companies often have a lower bankruptcy risk than small companies, the value of the Earnings Response Coefficient increases with firm size

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(Mashayekhi and Aghel, 2016). As research conducted by Sherla Sherlia (2016) which shows that firm size has a positive effect on the Earnings Response Coefficient

H3: Firm size has a positive effect on earnings response coefficient (ERC)
The following presents a picture of the research framework as follows:

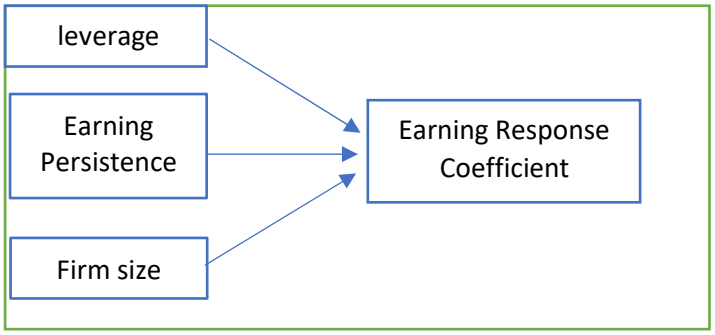


Figure 2: Framework

RESEARCH METHODS

Population

Infrastructure companies listed on the Indonesia Stock Exchange (IDX) during the 2018–2021 study period constitute the study population. In 2022, 61 infrastructure businesses are listed on the Indonesia Stock Exchange (IDX). (IDX Statistics, 2022).

Sample

By using a purposive sampling method, which involves selecting a sample based on certain criteria,. The following characteristics were selected when determining the sample:

Table 1 : Infrastructure Sector Sample (Source Idx.com)

No	Criteria	Amount	TOTAL
1	Total Population	61	Samples
1	The company is included in the infrastructure category listed on the Indonesia Stock Exchange (IDX) from 2018 to 2021.	-13	48
2	The company publishes financial reports for the period 2018 to 2021 consecutively on December 31.	-3	45
3	Companies that earn profits in a row during the study period.	-25	20

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4	Provides daily stock price data in the year of research.	-4	16
5	**Samples**	**16**	

Based on the sample criteria, a sample of 16 infrastructure companies was obtained during the 2018-2021 period which the author used as a research object.

Table 2: Variable definition and measurement

No	Variable Name	Definition	Indicator	Measurement Scale
Independent Variable				
1	leverage	Leverage is the use of assets and sources of funds by companies that have fixed expenses with the intention of increasing the potential profits of shareholders (Agus, 2010).	Ratio	$DER = \frac{\text{Total Liabilities}}{\text{Total Equity}}$
2	Earning Persistence	Earning persistence is a component of the predictive value of earnings in	Ratio	**PRST=** $\frac{\text{Profit before tax } t_{-1} - \text{Profit before tax } t}{\text{Total Asset}}$

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		determining earnings quality, and earnings persistence is determined by the accruals and cash flow components of current earnings, which represent the transitory and permanent nature of earnings (Sloan in Nicky, 2009).		
3	Firm size	According to Jogiyanto (2016) firm size is the size of the company which can be measured by the value of total assets or net sales or equity value.	Ratio	**Firm size = Ln (Total Assets)**

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Dependent Variable				
4	Earnings Response Coefficient	Systematic risk is a risk that affects all (many) companies (Suad, 2005). Beta is a measure of the company's systematic risk estimated by the market model	Ratio	**CAR = α +β(EU) + e**

Research result

Table 1 Chow Test

Effect Test	Statistics	df	Prob.
Cross-section F	4.513339	(15,45)	0.0000
Chi-square cross-sections	58.756333	15	0.0000

From the table above, the fixed effect model is used in this study because the probability value of the cross section F is 0.0000 or less than 0.05, which indicates that H0 is rejected and Ha is accepted (FEM).

Table 2 Hausman Test

Test Summary	Chi-Sq. Statistics	Chi-Sq. df	Prob.
Random cross-sections	64.816984	3	0.0000

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From the table above, the fixed effect model is used in this study because the probability value of the cross section F is 0.0000 or less than 0.05, which indicates that H0 is rejected and Ha is accepted (FEM).

Table 3 Lagrange Multiplier Test

Null (no rand. effect)	Cross-section	period	Both
Alternatives	One-sided	One-sided	
Breusch-Pagan	2.646509	0.029476	2.675985
	(0.1038)	(0.8637)	(0.1019)
Honda	1.626809	-0.171687	1.028927
	(0.0519)	(0.5682)	(0.1518)
King-Wu	1.626809	-0.171687	0.507414
	(0.0519)	(0.5682)	(0.3059)
SLM	2.180691	0.157508	--
	(0.0146)	(0.4374)	--
GM	--	--	2.646509
	--	--	(0.1185)

From the table above it is clear that the common effect model is used in this study because the probability value of the cross section F is (0.1038), or greater than 0.05, meaning that H0 is accepted and Ha is rejected (CEM).

Table 4 Conclusion Models

No	Method	Testing	Results
1	Chow test	CEM vs FEM	FEM
2	Hausman test	REM vs FEM	FEM
3	LM test	CEM vs REM	CEM

The fixed effect model (FEM) in panel data regression is used further in evaluating the effect of Leverage (DER), Earnings Persistence, and Firm Size (SIZE) on ERC in infrastructure companies listed on the IDX 2018–2021.

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Hypothesis testing

F test

To determine whether the independent factors collectively have a significant effect on the dependent variable, F test is carried out. Suliyanto (2011: 40) states that the regression equation model is included in the fit criteria because the F test is used to test the simultaneous effect of independent variables on the dependent variable. . On the other hand, if there were no concurrent influences, this would be considered inappropriate or not fit . By comparing the Fcount value with Ftable or by checking the probability value (prob.) from the table, this test is carried out. If the probability value is less than 0.05, then H0 is rejected, and it can be concluded that the independent variable and the dependent variable are affected simultaneously. Conversely, there are no independent variables that affect the dependent variable if the probability value is greater than 0.05, which leads to the conclusion that H0 is accepted. The following are the results of simultaneous hypothesis testing using the F test:

Table 7. TEST F

Cross-section fixed (dummy variables)			
R-squared	0.607319	Mean dependent var	179488.1
Adjusted R-squared	0.450247	SD dependent var	1602066.
SE of regression	1187858.	Akaike info criterion	31.05473
Sum squared residue	6.35E+13	Schwarz criterion	31.69565
Likelihood logs	-974.7514	Hannan-Quinn criter.	31.30722
F-statistics	3.866492	Durbin-Watson stat	3.286275
Prob(F-statistic)	0.000117		

Based on the output results in the table above, the hypothesis H0 is rejected and H1 is accepted because the results of the F-statistic are 3.866492 > 2.755 with a significance level of 0.000117 which indicates a significance level less than 0.05.

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Therefore, it can be said that leverage, earnings persistence, and firm size simultaneously affect the Earnings Response Coefficient (ERC), or in other words this research model can be applied (goodness of fit is achieved).

Coefficient of Determination (R2)

To find out how much influence the independent variable has on the dependent variable, the value of R2 (coefficient of determination) is calculated. The R2 value is between 0 - 1. The influence of all independent factors on the dependent variable decreases as the R2 value approaches zero. Conversely, if the R2 value increases and approaches 1, then all independent variables have a greater influence on the dependent variable. The coefficient of determination has a weakness, namely it can be related to the number of independent variables included in the regression model; consequently, even when the independent variable does not significantly influence the dependent variable, the coefficient of determination will increase with each additional independent variable and observation. A modified coefficient of determination, also known as Adjusted R Square, is used to mitigate this limitation.

Table 8. Determination Coefficient Test

Cross-section fixed (dummy variables)

R-squared	0.607319	Mean dependent var	179488.1
Adjusted R-squared	0.450247	SD dependent var	1602066.
SE of regression	1187858.	Akaike info criterion	31.05473
Sum squared residue	6.35E+13	Schwarz criterion	31.69565
Likelihood logs	-974.7514	Hannan-Quinn criter.	31.30722
F-statistics	3.866492	Durbin-Watson stat	3.286275
Prob(F-statistic)	0.000117		

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Based on the table above, the adjusted R-squared value calculated in this study is 0.607319, which indicates that independent factors (leverage, earnings persistence, and firm size) are able to explain the value of the dependent variable (Earnings Response Coefficient (ERC)) of 60.7319 %. Other factors outside the scope of this research model account for the remaining 39.2681%.

T test

The t test is used to determine whether there is an effect of each independent variable individually (partially) on the dependent variable tested at a significance level of 0.05. If the probability < 0.05 then the result is the influence of the independent variables individually on the dependent variable. Besides that, it can be used with other indicators, namely if the tcount > ttable, then H0 is rejected and it can be concluded that there is a significant effect partially on the dependent variable. If the value of tcount <ttable, then accept H0 and it can be concluded that the independent variable does not affect the dependent variable. The results of testing the hypothesis with the t test are as follows:

Table 9. T test

Variables	coefficient	std. Error	t-Statistics	Prob.
C	-16654120	4277129.	-3.893762	0.0003
DER	-218383.8	237011.9	-0.921404	0.3618
PRST	-37240.53	29936.68	-1.243977	0.2199
SIZE	695307.4	173472.0	4.008183	0.0002

Based on the table above it can be concluded that:

leverage

Table 9. shows that leverage as measured by the Debt to Equity Ratio (DER) shows a negative relationship to ERC. Leverage has a tcount (t-statistic) value of -0921404 < a ttable value of 2,000 with a probability of 03618 which means 03618 > α = 0.05. So, it can be concluded that leverage has no negative effect on ERC.

Earning Persistence

Table 9. shows that earnings persistence shows a negative relationship to ERC. It is clear that earnings persistence and ERC have a poor relationship. Earning Persistence has a probability of 0.2199 > = 0.05., tcount (t-statistic) of -1.243977

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<ttable value of 2,000. Thus, it can be concluded that earnings persistence has no negative effect on ERC.

Firm size

Table 9. shows that firm size (SIZE) shows a positive relationship to ERC. Firm size has a tcount (t-statistic) of 4.008183 > a ttable value of 2.000 with a probability of 0.0002 which means 0.0002 < α = 0.05. Thus, it can be concluded that firm size hasa positive and significant effect on ERC.

DISCUSSION RESULT

Leverage has no negative effect on Earnings Response Coefficient (ERC)

The first hypothesis (H1), according to the findings of the statistical analysis in this study, is rejected because leverage does not have a significant negative effect on the earnings response coefficient in this study. This study contradicts the research of Sri and Nur (2007) and Noviyanti and Erni (2008), who found that leverage significantly increases the earnings response coefficient (ERC). Because the level of leverage that is believed to cause bankruptcy risk is different for each company, this hypothesis is rejected because it is not in accordance with previous theory and research. The use of debt as a source of funding for a business does not always result in bankruptcy. According to Agus (2001), using debt can have advantages such as tax protection. This is because interest payments are tax deductible, resulting in higher returns for investors. Companies that use leverage with the aim of increasing shareholder profits with the amount of profit earned is greater than the cost of assets and sources of funding. According to Lukman (2009), if leverage is increased, there is a greater level of risk associated with realized returns, but at the same time, investors will see an increase in their overall returns. In addition, the number of businesses that did not release financial accounts contributed to the decrease in the sample size. This study is related to research conducted by Margaretta (2006), which found that, except for banking companies, all companies listed on the JSE between 1994 and 2003 had earnings response coefficients that were not affected by risk of failure or leverage. In addition, research by Nicky (2009) shows that the earning response coefficient (ERC) of industrial companies listed on the IDX in 2005–2007 was not affected by leverage or risk of failure.

Earnings Persistence has no negative effect on Earnings Response Coefficient (ERC)

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The results of this study indicate that earnings persistence has no negative effect on ERC. This contradicts current ideas, which argue that earnings persistence has a positive influence on ERC. The consistency of earnings shows the quality of these earnings and shows the company's ability to occasionally maintain profits. According to the findings of the study by Collin and Kothari (1994) and Ambarwati (2008), ERC is positively influenced by earnings persistence as measured by changes in earnings. The longer a company's earnings last, the more profits investors might anticipate in the future.

The findings of this study are consistent with those of Ali and Zahrowi (2002), who found that while earnings persistence has no impact on ERC, the presence of a transitory component in earnings makes earnings less useful as a proxy for ERC. Only current gain will be affected by the amount of temporary components; future profits are not affected. Non-recurring temporary components refer to activities that are not normally performed and will not necessarily be repeated in the future. Earnings used to forecast future policies become less relevant as a result of this cyclical component. According to Hapsari's research (2010), earnings persistence has no impact on ERC because investors do not react to shifts in earnings even when the company has shown good earnings persistence for the future. This shows that when choosing an investment, investors consider various factors besides profit information before making a decision. Due to the possibility that transitory items do not occur repeatedly in earnings, which makes them unable to accurately predict future earnings, the conclusions from the research findings suggest that earnings persistence cannot always be used as a yardstick in deciding future investment policies. This is in accordance with the opinion of Lev (1989), who stated that although profits may fluctuate over time, they generally do not predict future profits. Due to the possibility that transitory items do not occur repeatedly in earnings, which makes them unable to accurately predict future earnings, the conclusions from the research findings suggest that earnings persistence cannot always be used as a yardstick in deciding future investment policies. This is in accordance with the opinion of Lev (1989), who stated that although profits may fluctuate over time, they generally do not predict future profits. Due to the possibility that transitory items do not occur repeatedly in earnings, which makes them unable to accurately predict future earnings, the conclusions from the research findings suggest that earnings persistence cannot always be used as a yardstick in deciding future investment policies. This is in accordance with the opinion of Lev (1989), who stated that although profits may fluctuate over time, they generally do not predict future profits.

Firm size has a positive effect on Earnings Response Coefficient (ERC)

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Large companies are considered to have lower risk because they have many assets (Almilia and Devi, 2007). The reason is that larger businesses are perceived to have more flexibility and access to capital markets, allowing them to raise money. The findings of this study are consistent with the research of Chancy and Jeter (1992), which shows that the earnings response coefficient and firm size have a positive relationship. The research findings of Naimah and Utama (2006), which show a positive relationship between business size and income response coefficient, are similar. Large companies have access to a great deal of non-accounting data throughout the year. Investors use this data as a tool to better understand financial statements, making it possible to predict cash flows and reduce uncertainty.

CONCLUSION

Based on the results of the study it can be concluded that:

1. Leverage has no effect on the earnings response coefficient (ERC) in infrastructure companies listed on the Indonesian Stock Exchange (IDX)
2. Earning Persistence does not affect the earnings response coefficient (ERC) in infrastructure companies listed on the Indonesian Stock Exchange (IDX)
3. Firm size has a significant positive effect on earnings response coefficient (ERC) in infrastructure companies listed on the Indonesia Stock Exchange (IDX)

Limitations

1. A very small sample—all infrastructure companies listed on the Indonesia Stock Exchange—were used in this analysis (IDX).
2. Because the observation period of this study is only four years, from 2018 to 2021, it cannot indicate long-term trends.
3. In this study, the only factors that can affect the Earnings Response Coefficent (ERC) are Leverage, Earnings Persistence, and Firm Size.
4. In this study, the Earnings Response Coefficient (ERC) is just one of the techniques used to assess earnings quality. However, the Earnings Response Coefficient (ERC) is the dependent variable in this study.

Research suggestions

1. The population and research sample can be expanded with further research. For example, not only in the infrastructure sector, but can be added to service companies or other companies.
2. In order for future studies to produce more precise results, the observation period will likely be extended to more than four years.

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3. Additional research is expected to include factors that may affect the earnings response coefficient (erc).
4. It is suggested to use the earnings quality variable as the dependent variable in future research. Due to the fact that the earnings response coefficient (erc) is only one of many measurement tools used to determine earnings quality, and there are many other methods as well (erc).

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