

# ANALYSIS OF THE DEVELOPMENT OF SHARE PRICE OF COMPANIES LISTED ON THE SRI-KEHATI INDONESIA INDEX (CASE STUDY: IMPLEMENTATION OF SDG's)

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**Abstract:** This topic was raised based on the phenomena of economic development and environmental sustainability which are contradictory to one another. Various development efforts were carried out for the sake of high economic growth, while the ecological damage caused by excessive exploitation of nature was getting worse. Shares listed on the SRI-KEHATI Index were appointed as research objects because they are a form of implementing SDG's. The main objective of this study is to estimate the factors that influence the stock price of companies listed on SRI-KEHATI, as well as to estimate the effect of these stock prices on production growth. The data used in this study are cross sectional data and panel data. Where the cross-sectional data collected are all companies registered with SRI-KEHATI for 10 consecutive years and the sample was taken in 2017. Meanwhile, the panel data collected is data on all companies registered with SRI-KEHATI for 10 consecutive years and samples were taken from 2009 to 2017. Based on the estimation results using the multiple regression method using E-Views 10 software, in the first model a goodness of fit ( ) value was obtained of 0.999999 or 99.99%. Partially, the independent variables namely PER, EPS, TAT, and BB have a positive and significant effect on stock prices (HS), while the BIF variable has a negative and significant effect on HS. Simultaneously, the independent variables have a positive and significant effect on HS. In the second model, the goodness of fit ( ) value is 0.001599 or 0.15%. Variable Stock Price (HS) which is influenced by PER, EPS, TAT, BB, and BIF has a positive and not significant effect on Production Growth (PP).  $R^2 R^2$

**Keywords:** SRI-KEHATI, Share Price, PER, EPS, TAT, BB, BIF, Production Growth

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## INTRODUCTION

### Formulation of the problem

1. How is the development of companies registered with SRI-KEHATI Indonesia?
2. What factors influence the development of the share price of companies listed on SRI-KEHATI Indonesia in 2017?
3. How does the SRI-KEHATI stock price affect the production growth of companies registered on SRI-KEHATI from 2009 to 2017?

### Research purposes

1. Conduct descriptive economic analysis on the development of companies registered on SRI-KEHATI Indonesia.
2. Estimating the model regarding the factors that influence the development of stock prices of companies listed on SRI-KEHATI Indonesia.

3. Estimating the model regarding the effect of SRI-KEHATI's stock price on the production growth of companies listed on SRI-KEHATI

## Literature review

### a. Economic Development Theory

From an economics point of view, development is usually interpreted as an effort to achieve a sustainable level of income per capita growth so that the country can increase output faster than the rate of population growth. The rate and rate of growth of "real" per capita gross national income (GNI) (monetary growth in per capita GNI minus the inflation rate) is often used to measure the overall economic well-being of the population how much real goods and services are available for consumption and investment by the average population (Todaro & Smith, 2011).

#### A. Classical Theory

##### 1. Adam Smith

Adam Smith is the most prominent classical economist. His very famous book entitled "An Inquiry into The Nature and Cause of The Wealth of Nations" was published in 1776. He believed in the application of "natural law doctrine" in economic matters. He considers that everyone knows their own interests best so that everyone should be freed to pursue their own interests for their own benefit.

##### 2. David Ricardo

David Ricardo also expressed his views on economic development in an unsystematic way in his book *The Principles of political economy and Taxation*. This book was published in 1917, the third edition in 1921 as well as Ricardo's correspondence with several economists which contained Ricardo's ideas which became the basis for the formation of Ricardo's growth model.

##### 3. TR Malthus

The Malthusian concept of development does not consider the process of economic development to occur by itself. In fact, the process of economic development requires consistent efforts on the part of the people. He did not describe any movement towards a stationary state but emphasized that the economy experienced several downturns before reaching the highest level of development. So according to Malthus, the process of development is a process of ups and downs of economic activity, more than just the smoothness of economic activity.

## Research methods

### a. Research Approach

This research is a mini quantitative research, which aims to estimate and analyze the relationship between the variables that have been determined to answer the problem formulation. The data presented is panel data, namely a combination of cross section data (data collected at a certain point) and time series data (data arranged chronologically according to time on a particular variable). The variables to be observed are SRI-KEHATI's stock price variable which is influenced by financial indicators, as well as Production Growth which is influenced by stock prices and financial indicators.

**b. Research Place**

This research was conducted by looking at stock price data and financial indicators for the period 2009 to 2017 provided by the Indonesia Stock Exchange (IDX), Bank Indonesia (BI), and the SRI-KEHATI Foundation.

**c. Research time**

The research time is planned for four months, namely November 2018 to March 2019.

**Data Types and Sources****a. Data Type**

The data used in this research is based on the source, namely secondary data, which is data that has been collected by data collection agencies and published to the data user community. Based on the form is quantitative data, data measured in a numerical scale (numbers). Meanwhile, based on time is panel data, which is data from the same individuals observed over a certain period of time (Kuncoro, 2013).

**b. Data source**

The data used in this study is data derived from publications by the Indonesia Stock Exchange (IDX), Bank Indonesia (BI), and the SRI-KEHATI Foundation, either through the official website or by direct collection to the office.

**Data collection technique**

Data collection was carried out by taking it to the Indonesia Stock Exchange (IDX) Office, and through the official websites of the Indonesia Stock Exchange (IDX), Bank Indonesia (BI), and the SRI-KEHATI Foundation. Then library research (library research) was also carried out to obtain a theoretical basis that can support and can be used as a benchmark in this study. Literature research was carried out by reading, collecting, recording, and reviewing available literature such as books, journals, magazines, and articles concerning financial ratios and stocks.

**Research Object Sample**

This study uses a purposive sampling technique, in which the sample is selected based on specific criteria for a specific purpose. The criteria used in selecting the sample companies are as follows:

- 1) Companies listed on the Stock Exchange are also listed on the SRI KEHATI Index from 2009 to 2017 consecutively.
- 2) Companies that has a market capitalization and total assets greater than IDR 1 trillion.
- 3) Companies that are not engaged in the business of pesticides, nuclear, weapons, tobacco, alcohol, pornography, gambling, genetically modified organisms (GMO), and coal mining.
- 4) Companies with a free float ratio of greater than 10 percent and a positive Price Earning Ratio (PER).

So from these criteria obtained a sample of research objects as many as 13 companies.

**Estimation Models**

The econometric model that will be used in this study is as follows.

Econometric Model I: Effect of Financial Indicators on Stock Prices

$$HS_f = \alpha_0 + \alpha_1 \cdot PER_f + \alpha_2 \cdot EPS_f + \alpha_3 \cdot TAT_f + \alpha_4 \cdot BB_f + \alpha_5 \cdot BIF_f + \varepsilon_f \dots\dots(3-1)$$

- Where:
- $HS_f$  = Price of shares listed on the SRI-KEHATI Index
  - $f$  = Companies listed on the SRI-KEHATI Index
  - $PER_f$  = Price Earning Ratio or price to profit ratio
  - $EPS_f$  = Earning Per Share or Profit Per Share
  - $TAT_f$  = Total Asset Turnover or asset turnover
  - $BB_f$  = Interest Expense
  - $BIF_f$  = Inflation Burden
  - $\alpha_0$  = Constant
  - $\alpha_{1...5}$  = Parameters of each independent variable
  - $\varepsilon_f$  = *Error Term*

Econometric Model II: Effect of Financial Indicators and Stock Prices on Production Growth

$$PP_{ft} = \beta_0 + \beta_1 HS_{ft} f(IF_{ft}) + \mu_{ft} \dots\dots\dots(3-2)$$

- Where:
- $PP_{ft}$  = Production Growth
  - $f$  = Companies listed on the SRI-KEHATI Index
  - $t$  = Time period (2009-2017)
  - $HS_{ft}$  = Stock Price
  - $IF_{ft}$  = Financial Indicators
  - $\beta_0$  = Constant
  - $\beta_1$  = Parameters
  - $\mu_{ft}$  = *Error Term*

**Results and Discussion**

**a. Regression Analysis Results**

**Table 4-17**  
**Multiple Regression of Stock Price Model (HS)**

Dependent Variable: HS  
Method: Least Squares  
Date: 03/05/19 Time: 14:06  
Samples: 1 13  
Included observations: 13

Variables	coefficient	std. Error	t-Statistics	Prob.
C	-17157.17	3863767	-4.440529	0.0030
PER	689.0166	224.5795	3.068030	0.0181
EPS	19.59616	2.626592	7.460682	0.0001
TAT	4029,478	6175.257	0.652520	0.5349
BB	0.000122	0.000164	0.745188	0.4804
BIF	2.54E-05	0.000773	0.032862	0.9747
R-squared	0.946207	Mean dependent var		13040.00
Adjusted R-squared	0.907783	SD dependent var		16069.58
SE of regression	4879,878	Akaike info criterion		20.12767
Sum squared residue	1.67E+08	Schwarz criterion		20.38841
Likelihood logs	-124.8298	Hannan-Quinn criter.		20.07407
F-statistics	24.62570	Durbin-Watson stat		2.144230
Prob(F-statistic)	0.000263			

Source: *E-Views 10* and processed

From the results of the first regression above, it was found that partially there were independent variables that did not significantly affect the dependent variable, and the BIF variable did not negatively affect HS. There are 3 variables that are not significant in the results above, namely TAT, BB, and BIF. However, the regression produces a high R-Squared of 0.94, meaning that the ability of the independent variable to explain the dependent variable is very high and there is no autocorrelation. Then this model is also tested for multicollinearity, the results are as follows:

**Table 4-18**  
**Stock Price Model Multicollinearity Test (HS)**

Variance Inflation Factors  
Date: 03/05/19 Time: 13:53  
Samples: 1 13  
Included observations: 13

Variables	coefficient Variances	Uncentered VIF	Centered VIF
C	14928697	8.149807	NA
PER	50435.94	17.62858	4.212631

EPS	6.898983	2.221978	1.029931
TAT	38133802	15.73252	6.322905
BB	2.68E-08	4.344216	2.962060
BIF	5.97E-07	3.786068	1.409709

Source: *E-Views 10 and processed*

The test results above show that the Centered VIF value is less than 10 ( $VIF < 10$ ), which means that there is no multicollinearity in the regression results above. However, because there are variables that are not significant, the test is carried out again by eliminating one of the variables and the results are as follows:

**Table 4-19**  
**Multiple Regression HS Model by Eliminating One Variable**

Dependent Variable: HS  
 Method: Least Squares  
 Date: 03/05/19 Time: 14:26  
 Samples: 1 13  
 Included observations: 13

Variables	coefficient	std. Error	t-Statistics	Prob.
C	-14281.62	5368936	-2.660046	0.0288
EPS	19.10366	3.755142	5.087333	0.0009
TAT	20428.14	4429,768	4.611560	0.0017
BB	0.000421	0.000188	2.234089	0.0559
BIF	-0.000463	0.001083	-0.427936	0.6800
R-squared	0.873872	Mean dependent var		13040.00
Adjusted R-squared	0.810808	SD dependent var		16069.58
SE of regression	6989650	Akaike info criterion		20.82597
Sum squared residue	3.91E+08	Schwarz criterion		21.04326
Likelihood logs	-130.3688	Hannan-Quinn criter.		20.78131
F-statistics	13.85694	Durbin-Watson stat		2.432060
Prob(F-statistic)	0.001138			

Source: *E-Views 10 and processed*

From the regression results of the two HS models, it almost shows results that lead to BLUE (Best, Linear, Unbias, Estimator). By eliminating one of the variables, one variable was found that was not significant, namely BIF, but here BIF showed a negative relationship with the HS variable and no autocorrelation occurred. Then these results were also tested for multicollinearity below.

**Table 4-20**

**HS Model Multicollinearity Test by Eliminating One Variable**

Variance Inflation Factors

Date: 03/05/19 Time: 14:28

Samples: 1 13

Included observations: 13

Variables	coefficient Variances	Uncentered VIF	Centered VIF
C	28825479	7.670240	NA
EPS	14.10109	2.213678	1.026084
TAT	19622841	3.945999	1.585899
BB	3.55E-08	2.805077	1.912614
BIF	1.17E-06	3.625085	1.349768

*Source: E-Views 10 and processed*

The results above show that the results of the second regression also do not have multicollinearity because the VIF value is less than 10 ( $VIF < 10$ ). However, to get BLUE results, it is necessary to apply natural logarithms in this model. The natural logarithmic transformation is usually used in situations where there is a non-linear relationship between the explanatory (independent) variable and the dependent (dependent) variable. The natural logarithmic transformation will make non-linear relationships usable in linear models. Here are the natural logarithms in this model:

**Table 4-21**

**Natural Logarithmic Stock Price Model (HS)**

Dependent Variable: LN\_HS

Method: Least Squares

Date: 03/06/19 Time: 15:33

Samples: 1 13

Included observations: 13

Variables	coefficient	std. Error	t-Statistics	Prob.
C	0.010906	0.009862	1.105801	0.3054
LN_PER	0.995296	0.001399	711.4770	0.0000
LN_EPS	1.000919	0.000510	1963.013	0.0000
LN_TAT	0.008404	0.002019	4.161584	0.0042
LN_BB	0.006857	0.001514	4.528867	0.0027

LN_BIF	-0.006734	0.001729	-3.895366	0.0059
R-squared	0.999999	Mean dependent var		8.833228
Adjusted R-squared	0.999998	SD dependent var		1.228511
SE of regression	0.001824	Akaike info criterion		-9.471524
Sum squared residue	2.33E-05	Schwarz criterion		-9.210779
Likelihood logs	67.56491	Hannan-Quinn criter.		-9.525120
F-statistics	1088719.	Durbin-Watson stat		2.776252
Prob(F-statistic)	0.000000			

Source: E-Views 10 and processed

From the results of the natural logarithm test above, it can be seen that all independent variables show significant results in degree . The R-Squared value is also very high, namely 0.99, meaning that the ability of the independent variable to explain the dependent variable is very high. In this natural logarithmic transformation, autocorrelation does not occur and is free from multicollinearity.  $\alpha$  5%

**Table 4-22**

**Multiple Regression Production Growth (PP) Model**

Dependent Variable: PP  
 Method: Panel Two-Stage Least Squares  
 Date: 03/08/19 Time: 18:09  
 Samples: 2009 2017  
 Period included: 9  
 Cross-sections included: 13  
 Total panel (balanced) observations: 117  
 Instrument specification: C PER EPS TAT BB BIF

Variables	coefficient	std. Error	t-Statistics	Prob.
C	0.120412	0.023417	5.142052	0.0000
HS	3.03E-07	1.64E-06	0.184513	0.8539
R-squared	0.001599	Mean dependent var		0.123615
Adjusted R-squared	-0.007083	SD dependent var		0.169387
SE of regression	0.169986	Sum squared residue		3.322945
F-statistics	0.034001	Durbin-Watson stat		1.420580
Prob(F-statistic)	0.854030	Second-Stage SSR		3.327282
Instrument rank	6	Prob(J-statistic)		0.347002

Source: E-Views 10 and processed

The regression results above use the 2SLS technique, where the HS which influences production growth is also influenced by Price Earning Ratio (PER), Earning Per Share (EPS), Total Asset Turnover (TAT), Interest Expense (BB), and Inflation Expense (BIF). . From the results of the stock price (HS) regression model on production growth (PP), the result is that the



share price (HS) partially has no significant effect. Although not significant, this second model is free from autocorrelation problems.

#### **4.1.1 Assessment**

##### **1. Correlation (R)**

From the regression results in the first model (variables that affect HS) which have been transformed to natural logarithms, an R value of 0.9999995 is obtained, meaning that the degree of closeness between PER (Price Earning Ratio), EPS (Earning Per Share), TAT ( Total Asset Turnover), BB (Interest Expense), and BIF (Inflation Expense) with a share price (HS) of 0.9999995..

The regress results in the second model (Share Price on Production Growth) obtained an R value of 0.039987498, meaning that the degree of closeness between Stock Prices (HS) which is influenced by PER, EPS, TAT, BB, and BIF with production growth (PP) is 0.9999995.

An independent variable is said to have the strength of a positive relationship to the dependent variable if it has a coefficient value marked positive and valued above 0.05 () and is said to be significant if the probability value of the independent variable is less than 0.05.  $\alpha = 5\%$

##### **2. Coefficient of Determination ( $R^2$ )**

The coefficient of determination (R Square) shows the proportion of the total variable percentage in explaining the dependent (dependent) variable which is explained by the independent (independent) variables together. Based on the first estimation model, namely the variables that affect stock prices (HS), after the Natural Logarithm is carried out, it can be seen that the value is 0.999999, meaning that together the price to earnings ratio (PER), earnings per share (EPS), total asset turnover (TAT), interest

expense (BB), and inflation expense (BIF) provide a variety of explanations for the Share Price (HS) of 99.99%. Meanwhile, 0.01% is explained by other variables that are not included in the estimation model or are in the disturbance error term, such as debt levels, ROA values, ROE values, and so on.  $R^2$

Meanwhile, from the second estimation model, namely stock prices (HS) in influencing production growth, it can be seen that the value is 0.001599, meaning that the HS independent variable is only able to explain the PP dependent variable of 0.15%. The other 99.85% value is explained by other variables that are not included in the estimation model or are in the disturbance error term such as ROA, ROE and so on.  $R^2$

#### 4.1.2 Interpretation of Results

From the first data that has been obtained, the regression equation will be analyzed using the results of the natural logarithm (ln), then the first model is as follows.

$$HS_f = \alpha_0 + \alpha_1 \cdot LN\_PER_f + \alpha_2 \cdot LN\_EPS_f + \alpha_3 \cdot LN\_TAT_f + \alpha_4 \cdot LN\_BB_f + \alpha_5 \cdot LN\_BIF_f + \varepsilon_f$$

Then the interpretation of the results of the first model is as follows:

$$HS_f = 0.010906 + 0.995296 LN\_PER_f + 1.000919 LN\_EPS_f + 0.008404 LN\_TAT_f + 0.006857 LNBB_f + (-0.006734) LNBIF_f + \varepsilon_f$$

From the estimation results obtained, an interpretation of the multiple linear regression model can be made as follows:

- a. Coefficient, meaning that if the ratio of price to earnings (PER), earnings per share (EPS), total asset turnover (TAT), interest expense (BB), and inflation expense (BIF) from 13 companies for 1 year does not exist, then the stock price the 13 companies are estimated at

0.010906 rupiah.  $\alpha_0 = 0,010906$

- b. Coefficient, meaning that if the value of the price to profit ratio (PER) of 13 companies for 1 year increases by 1%, then the share price of the 13 companies will increase by 0.995296 rupiah (ceteris paribus).  $\alpha_1 = 0,995296$
- c. Coefficient, meaning that if the value of the ratio of earnings per share (EPS) of 13 companies for 1 year increases by 1 rupiah, then the stock price will increase by 1.000919 rupiah (ceteris paribus).  $\alpha_2 = 1,000919$
- d. Coefficient, meaning that if the total value of asset turnover (TAT) of 13 companies for 1 year increases by 1%, then the share price will increase by 0.008404 rupiah (ceteris paribus).  $\alpha_3 = 0,008404$
- e. Coefficient, meaning that if the value of interest expense (BB) of 13 companies for 1 year increases by 1 million rupiah, then the share price will increase by 0.006857 rupiah (ceteris paribus).  $\alpha_4 = 0,006857$
- f. Coefficient, meaning that if the value of inflation expense (BIF) of 13 companies for 1 year increases by 1 million rupiah, then the share price will decrease by 0.006734 rupiah (ceteris paribus).  $\alpha_5 = -0,006734$

From the second model that has been obtained, it will be analyzed using the results of the regression equation as follows:

$$PP_{ft} = 0.120412 + 3.033333 HS f (IF_{ft}) + \mu_{ft}$$

From the estimation results obtained, an interpretation of the model or hypothesis can be made through the regression results, namely:

- a. Coefficient, meaning that if the value of the stock price (HS) is influenced by the price to profit ratio (PER), earnings per share (EPS), total asset turnover (TAT), interest expense (BB), and inflation expense (BIF) of 13 companies for 9 years there is no, then the production growth (PP) is 0.120412 rupiah.  $\beta_0 = 0,120412$
- b. Coefficient, meaning that if the value of the stock price (HS) is influenced by the price to profit ratio (PER), earnings per share (EPS), total asset turnover (TAT), interest expense (BB), and inflation expense (BIF) of 13 companies for 9 years increases by 1 rupiah, then production growth (PP) will increase by 3.033333% (ceteris paribus).  $\beta_1 = 3,033333$

#### 4.1.3 Constants and Intercepts

In the results of estimating data in the first regression model, there is a constant value of 0.010906 which is positive. This shows that the average value level of shares listed on SRI-KEHATI tends to increase when the explanatory variable remains constant. The interpretation of the independent variable regression results will be explained as follows:

##### 1) Share Price (HS)

The probability value of the dependent variable HS is 0.3054 ( $> 0.05$ ), meaning that it is not true if the price to earnings ratio (PER), earnings per share (EPS), total asset turnover (TAT), interest expense (BB), and no inflation expense (BIF) from 13 companies for 1 year, then the share price is 0.010906 rupiah.

##### 2) Price Earning Ratio(PER)

From the regression results, the coefficient value of the PER variable is 0.995296 where this variable has a significant effect on the price of shares listed on SRI-KEHATI Indonesia. The probability value is 0.0000 ( $< .$ ). This shows that there is a positive relationship between price to earnings ratio (PER) and stock price (HS) for 13 companies over a period of 1 year.  $\alpha 5\%$

### **3) *Earning Per Share*(EPS)**

From the regression results, the coefficient value of the EPS variable is 1.000919 where this variable has a significant effect on the price of shares listed on SRI-KEHATI Indonesia. The probability value is 0.0000 ( $<$  ). This shows that there is a positive relationship between earnings per share (EPS) and stock price (HS) for 13 companies over a period of 1 year.  $\alpha$  5%

### **4) *Total Asset Turnover*(TAT)**

From the regression results, the coefficient value of the TAT variable is 0.008404 where this variable has a significant effect on the price of shares listed on SRI-KEHATI Indonesia. The probability value is 0.0000 ( $<$  ). This shows that there is a positive relationship between total asset turnover (TAT) and stock prices (HS) for 13 companies over a period of 1 year.  $\alpha$  5%

### **5) *Interest Expense* (BB)**

From the regression results, the coefficient value of the BB variable is 0.006857 where this variable has a significant effect on the stock prices listed on SRI-KEHATI Indonesia. The probability value is 0.0027 ( $<$  ). This shows that there is a positive relationship between interest expense (BB) and stock price (HS) for 13 companies over a period of 1 year.  $\alpha$  5%

### **6) *Inflation Burden* (BIF)**

From the regression results, the coefficient value of the BIF variable is -0.006734 where this variable has a significant effect on the price of shares listed on SRI-KEHATI Indonesia. The probability value is 0.0059 ( $<$  ). This shows that there is a negative relationship between inflation costs (BIF) and stock prices (HS) for 13 companies over a period of 1 year.  $\alpha$  5%

**Table 4-23**

**Summary of Model I Data Processing Results**

Variable	OLS (Ordinary Least Square)	
	Model 1 before Ln	Model 2 after Ln
PER	689.0166*** (3.068030)	0.995296*** (711.4770)
EPS	19.59616*** (7.460682)	1.000919*** (1963013)
TAT	4029,478 (0.652520)	0.008404*** (4.161584)
BB	0.000122 (0.745188)	0.006857*** (4.528867)
BIF	2.54E-05 (0.032862)	-0.008404*** (-3895366)
Constant	-17157.17 (-4.440529)	0.010906 (1.105801)
N_Company	13	13
Adj R-Square	0.907783	0.999998
F-statistics	1088719***	1088719.***
Durbin Watson	2.776252	2.776252

Description: \*\*\*Level of Significance, \*\*\*1%, \*\*5%, \*10%  
 (t-Statistics)

**Table 4-24**

**Summary of Model II Data Processing Results**

Variable	2SLS (2 Stage Least Square) Model PP
HS	3.03E-07 (0.184513)
Constant	0.120412*** (5.142052)
N_Company	13
Total Observations	117
Adj R-Square	-0.007083
F-statistics	0.034001
(Durbin Watson)	1.420580

Description: \*\*\*Level of Significance, \*\*\*1%, \*\*5%, \*10%  
 (t-Statistics)

#### 4.1.4 Statistic test

##### 1) Individual Parameter Significant Test (t-test)

The statistical t-test was carried out with the aim of showing how much influence the independent variables individually explain the variation of the dependent variable. Regression of the influence of PER, EPS, TAT, BB, and BIF variables in the first model with an autoregressive test on the stock prices of companies registered on SRI-KEHATI Indonesia. As for the regression in the second model, it shows the effect of the HS variable on Production Growth of shares registered on SRI-KEHATI. As for in this study to see the value, namely:  $t_{tabel}$

Model I:  $df (n)-k = 13-6 = 7$ , then the value is  $2.365 \alpha = 5\% t_{tabel}$

Model II:  $df (n)-k = 117-7 = 110$ , then the value is  $1.982 \alpha = 5\% t_{tabel}$

##### 2) Simultaneous Significant Test (F-Test)

Statistical F-test aims to test the significance of all independent variables together on the value of the dependent variable. From the regression results using autoregressive in the first model, the PER, EPS, TAT, BB, and BIF variables on the stock prices of companies registered on SRI-KEHATI Indonesia, the value is 0.000000 (below), while the value is 1088719. This shows that the independent variables together have a significant effect on the dependent variable.  $F_{tabel} \alpha 5\% F_{hitung}$

#### 4.1.5 Classic assumption test

##### 1) Multicollinearity Test

This test aims to test whether the first or second regression model has a correlation between the independent (independent) variables. The requirement for a good regression model is that it should be free from multicollinearity, and it can be seen from the results of the first and second model analysis that no multicollinearity is found, because there is no sign of the coefficient changing (according to the hypothesis).

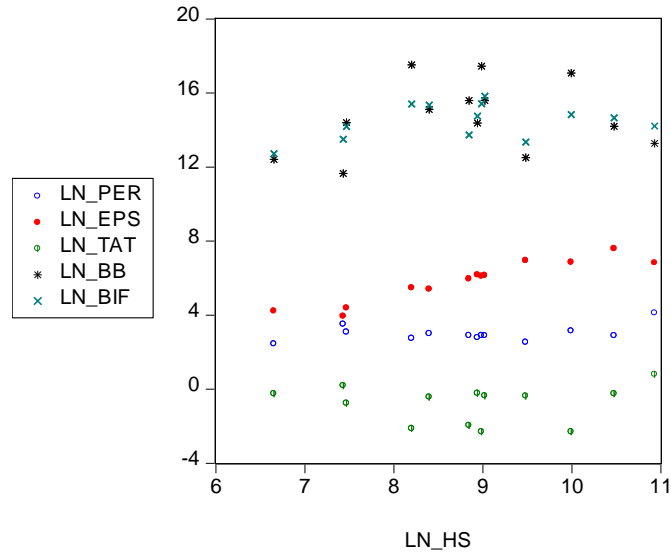
## **2) Heteroscedasticity Test**

The heteroscedasticity test aims to test whether there is an inequality of variance in the model from one residual observation to another. If the variance from the residual of one observation to another remains, then it is called homoscedasticity and if it is different, it is called heteroscedasticity. A good regression model is one that is free from heteroscedasticity. To see whether there is heteroscedasticity, you can do it by looking at the scatterplot graph between the predicted values of the dependent variable and its residuals. The basis for heteroscedasticity analysis is as follows:

**Figure 4-14**

***Scatter plots* Share Price Model (HS)**



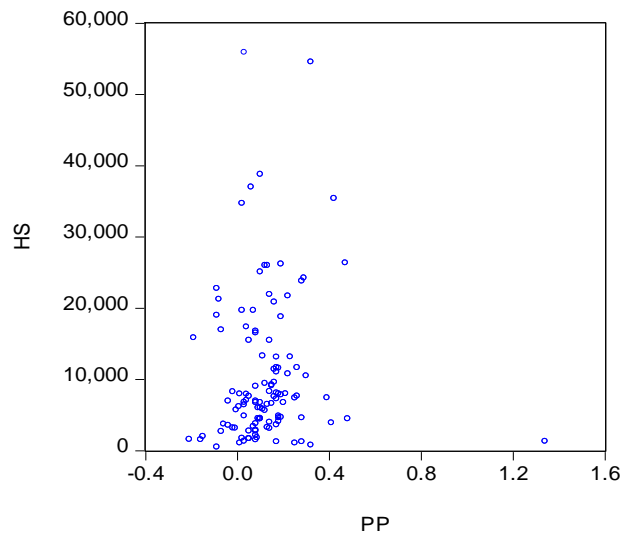


Source: E-Views 10 and processed

The picture above shows that the points spread randomly on the X and Y axes. Thus there is no heteroscedasticity in the first model.

**Figure 4-15**

**Scatter plots Production Growth Model (PP)**



Source: E-Views 10 and processed

The picture above shows that the points spread in groups and spread upward towards the Y axis. Thus it can be concluded that there is no heteroscedasticity in the second model.

### 3) Autocorrelation Test

The autocorrelation test aims to test whether in a linear regression model there is a correlation between misuse in period  $t$  and errors in period  $t-1$  (previously). To test whether a model has autocorrelation in this study, the Durbin Watson statistical test is used by looking at the value (DW) obtained.

In the first model after testing in the form of natural logarithms, the Durbin Watson value is 2.776252, meaning that the model used is free from autocorrelation problems. Whereas in the second model a DW value of 1.420580 is obtained, meaning that the model used is also free from autocorrelation problems so that the model can be estimated through independent variables which are described through the HS variable.

### 4) Hausman test

To determine the regression model for panel data, a significant test was carried out between the Fixed Effect and Random Effect models to find out which model is more appropriate to use. Here are the test results.

**Table 4-25**

#### **Hausman test**

Correlated Random Effects - Hausman Test

Equation: Untitled

Test period random effects

Test Summary	Chi-Sq. Statistics	Chi-Sq. df	Prob.
Random periods	10.200970	6	0.1164

\*\* WARNING: the estimated period random effects variance is zero.

Source: *E-Views 10 and processed*

From the results above, we get a random effect value of 0.1164. The probability value is  $> 0.05$ , so the selected model is the fixed effect. So it can be concluded that the fixed effect model is more appropriate than the random effect model.

## 4.2 Discussion

The phenomena of economic development and environmental sustainability are contradictory. Various development efforts were carried out for the sake of high economic growth, while the ecological damage caused by excessive exploitation of nature was getting worse. Based on the theory of economic growth, economic growth is an indicator of successful development. Thus, the higher the economic growth, the higher the social welfare, although there is another indicator, namely income distribution. Economic growth refers to a process to obtain output, where achievement measures require a long term. To realize long-term development, environmental preservation is needed from the government and business actors. Many companies think that preserving the environment in their production activities will reduce their profit level because of the relatively large additional costs that must be borne. However, based on descriptive analysis, companies listed on the SRI-KEHATI Index have very good performance. It can be said that by preserving the environment, it will not harm the company.

Based on the regression results, the factors that influence stock prices are price to earnings ratio (PER), earnings per share (EPS), total asset turnover (TAT), interest expense (BB), and inflation expense (BIF). The relationship between the independent variables is very close, as can be seen from the correlation value in the regression results of 0.999999. In some companies, interest expense can have a negative effect. If the company uses debt in an inefficient way, the interest expense will be negative. However, in the 13 companies listed on the SRI-KEHATI Index for 10 years, the effect of interest expense on stock prices is positive. That is, the more debt a company has, the more production it produces so that the company's revenue also increases. It can be said that the large debt value of the 13 companies listed on SRI-KEHATI

does not mean a loss for the company due to additional costs in protecting the environment, but indicates that the company's performance is getting better.

The share prices of companies listed on the SRI-KEHATI Index are indeed considered high, but investors who have insight about *Social Responsibility* will continue to vote for shares registered on SRI-KEHATI. Investors also admit that they are willing to buy sustainable stocks at a premium price. The more investors who buy shares listed on SRI-KEHATI will increase the production growth of the company. The production growth of companies registered on SRI-KEHATI greatly contributes to GDP (Gross Domestic Product) growth, because there are various sectors in it such as agriculture, mining and quarrying, processing industry, finance, leasing and company services.

Saham the greatest influence is Banking sector. Banking stocks still dominate the Top 10 Market Cap on the Indonesia Stock Exchange, followed by the consumer goods industry. These two sectors deserve to be at the top, amid the domination of banks as a source of state financing and the high contribution of household consumption to Gross Domestic Product (GDP). This is also supported by Indonesia's economic growth which is projected to improve, despite pressure from slowing global growth and trade wars. Until this year, the issuer with the largest market cap was Bank Central Asia worth IDR 671.23 trillion. The market capitalization of this private bank whose shares are mostly controlled by foreigners reaches 9.11% of the total market cap of 625 issuers on the Indonesia Stock Exchange (IDX).

Next on the list of the top 10 market caps are Bank Rakyat Indonesia (Persero), HM Sampoerna, Unilever Indonesia, Telekomunikasi Indonesia (Persero), Bank Mandiri (Persero), Astra International, Gudang Garam, Bank Negara Indonesia (Persero), and Charoen Pokphand Indonesia. From that list, four issuers came from banking, three from the consumer goods industry, and the rest from the various industrial sectors; basic and chemical industry; as well as infrastructure, utilities, and transportation. Of the ten lists of market caps on the Indonesia Stock

Exchange, stocks listed on the SRI-KEHATI Index are dominated, including BRI, Unilever Indonesia, Telekomunikasi Indonesia, Bank Mandiri, and Astra International. This proves that shares listed on the SRI-KEHATI Index are able to dominate the market on the Indonesian Stock Exchange.

The growth in market capitalization on the Indonesian stock exchange indicates rising share prices and investor confidence. In addition to the reduced global negative sentiment in line with the Fed's policy which is unlikely to raise US interest rates again this year, the strengthening of stock prices is supported by the good prospects for issuers' performance and projected improvement in domestic economic growth. Investment is the second largest contributor to national GDP, around 33.84%, and next is government consumption of 12.09%. Thus if investment increases, then economic growth will also increase on condition that the investment will take place in the long term. So those that play the most role in economic growth through investment are companies registered on SRI-KEHATI.

## **Conclusion Suggestion**

### **Conclusion**

Based on the results of the research and discussion described in the previous chapter, the following conclusions can be drawn:

1. The estimation results of the first model are the effect of PER, EPS, TAT, BB, and BIF on HS of 99.99%, while the remaining 0.01% is explained by other variables that are not included in the estimation model or are in the disturbance error term.
2. The estimation results of the second model are the influence of HS which is influenced by PER, EPS, TAT, BB, and BIF on PP of 0.15%, while the remaining 99.85% is explained by other variables that are not included in the estimation model or are in the disturbance error term.
3. Taken together the variables PER, EPS, TAT, BB, and BIF have a big influence on stock prices (HS).
4. Partially, the variables PER, EPS, TAT, and BB have a positive and significant effect on stock prices (HS). The BIF variable has a negative and significant effect on the growth of

stock prices (HS). While the HS variable which is influenced by PER, EPS, TAT, BB, and BIF has a positive and not significant effect on Production Growth (PP).

5. The more investors who buy shares listed on SRI-KEHATI will increase the production growth of the company. The production growth of companies registered on SRI-KEHATI greatly contributes to GDP (Gross Domestic Product) growth, because there are various sectors in it such as agriculture, mining and quarrying, processing industry, finance, leasing and company services.

### **Suggestion**

1. The test results show that the influence of Price Earning Ratio (PER), Earning Per Share (EPS), Total Asset Turnover (TAT), Interest Expense (BB), and Inflation Expense (BIF) have implications for investors and companies. For investors or potential investors, before buying shares in a company, it is advisable to perform analysis techniques with financial ratios such as PER, EPS, TAT, BB, and BIF to minimize losses in investing in the capital market.
2. For companies included in the SRI-KEHATI index, pay more attention to company profitability ratios such as Net Profit and EPS in generating profits. Based on the 13 sample companies in this study, it was found that companies included in the SRI-KEHATI index could be said to have experienced a decline in terms of generating profits. Things like this can reduce investors' willingness to invest in companies listed on the SRI-KEHATI index, so that the impact will be on a decrease in company value growth.
3. Companies listed on the SRI-KEHATI Index always pay attention to environmental sustainability in generating profits. Even though many companies have to bear the costs for conservation activities, these companies are still able to generate high profits. Therefore, all companies should be able to carry out social responsibility towards the environment in order to gain profits.
4. For the Government, in order to be able to adopt policies in encouraging companies to operate while still paying attention to social responsibility towards the environment.

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