# THE EFFECTS OF RESEARCH & DEVELOPMENT, PROMOTION & DISTRIBUTION, TRAINING, AND RETURN ON EQUITY ON STOCK RETURN BEFORE AND DURING THE EXTRAORDINARY CONDITION: EVIDENCE FROM INDONESIAN PHARMACEUTICAL COMPANIES FOR Q1 2010-Q2 2021

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**ABSTRACT**

*The need of costs of Research & Development (R&D), promotion and distribution, training are very crucial for pharmaceutical companies. These costs influence the company's performance that will impact its share return especially if there is an extraordinary condition that emerged from the macro environment, such as the Covid-19 pandemic. The objective of the study will measure and evaluate the impact of these costs, as independent variables toward the share return as the dependent variable. In Kalbe Farma Tbk, the cost of training for Q4 2020 is 163% compared with Q3 2020, however, the share return and income showed inconsistency for this period. The share return is minus five and the return of equity is higher compared with Q3 2020. There were two pharmaceutical companies listed in The Jakarta Stock Exchange as the objects. The quarterly data are taken from the financial reports Q1 2010 - Q2 2021. The financial reports show that there is a gap between those cost-share returns and income. The statistical tool of Eviews will be used such as the T-test and F test to know whether the variables are impacted each other negatively or positive and multicollinearity to measure the relationship. The research is expected to give contributions to pharmaceutical companies, investors, and government institutions. However, there is a limitation in this research due to the lack of complete data, the author only took two companies from pharmaceutical companies listed in the Jakarta Stock Exchange.*

Keywords: Pharmaceutical Company, Share Return, Research & Development Cost, GDP, Return on Equity

## INTRODUCTION

In a globalizing and competitive environment, companies are struggling to break into the market or maintain their performance. To stay afloat in the market, these companies must devise, implement, and execute a strategy. All factors encapsulated in the macro and micro levels must be taken into account in these strategies. From one industry to the next, the macro and micro environments change. The issues faced by the oil and gas business differ from those faced by the pharmaceutical industry. Even while several aspects in common industrial areas are similar, such as employment and government laws. This study focused on product, promotion, people, and place, and was based on the 7ps marketing mix hypothesis. In a pharmaceutical firm, innovation is required, and the outcome is a new product that is introduced to the market. There are long stages of transformation from the raw material into the hand of the customer as the end-user. Research and development expense for example is an expense for a company that has an impact on profit and loss, financial performance, and the end share return for investors. However, a company's ability to control all expenses, including this activity, is influenced not just by the microeconomic but also by the macroeconomic environment. An earthquake, a rapid change in government legislation, a political crisis, or other unusual circumstances might raise or decrease research and development costs. For example, there will be a difference between before and after an extreme incident. Ideally, this macroeconomic circumstance will have the same influence on enterprises in the same industry. However, there is a distinction between private and state-owned pharmaceutical enterprises in Indonesia. In 2020, one pharmaceutical company's stock return will be good, but its financial performance will be negative, compared to a private company's steady and positive performance. Due to the COVID 19 pandemic, all businesses in Indonesia, especially the pharmaceutical industry, have been in a tailspin since early 2020. This study will analyze the relationship of costs, GDP, and ROE to share return as well as covid 19 as an influencing factor.

## LITERATURE REVIEW

### 1.1 Research & Development Expense

According to a study performed by Kristen Petra University in Surabaya, the size of the company has no bearing on managerial earnings, which has an influence on the cost of research and development (Wijaya & Christiawan, 2017). Meaning that small and medium-sized companies might have the same or even more high earnings compared with large-sized companies. Because other factors also influence the earnings such as the strategy taken by the management, supply chain agility, and market influence also contributed to the earning. According to a study conducted by Shandong University, taxes plays a critical influence in a company's Research & Development related profits management decision under the current regulatory incentive structure in China. (Shang, 2021). From 2007 to 2015, a study conducted by the Korea Institute of Science and Technology Information examined the relationships between R&D spending and turnover and the number of listed companies in all industrial areas of the world, using correlation and linear regression analyses based on the US SIC primary code. The research and development cost has been proven to have an impact on both the turnover and the number of listed companies (Park, Park, & et al, 2018). The research and development cost plays a vital role in company innovation. Especially for pharmaceutical companies, where most of the products depend on medicine new inventions.

1.2 Promotion & Distribution Expense

According to research conducted by Sriwijaya University, company promotion behavior in the form of advertising is solely to maintain and increase market share (Saftiana & et al, 2018). In order for a product to exist in the market for a certain period of time, it needs to be continuously advertised whether through product promotion, renewing the packaging, or even splitting it into different varieties. According to a study conducted by Petra Christian University, promotional charges included in a selling expense have a beneficial impact on profitability and result in increased profitability for the company (Memarista & et al, 2018). When items are delivered to customers, distribution costs are incurred. It is a component of the total cost of goods sold. According to research performed this year in Indonesia, distribution costs have no major impact on sales performance. Increases in the variable distribution cost do not lead to increases in sales performance, and decreases in the variable distribution cost do not lead to decreases in sales performance. As a result, increasing distribution expenses must be done as efficiently as possible, because the higher the distribution costs, the higher the volume of sales delivered (Dharmayuni & et al, 2021). One way to make this expense to be efficient is by collaborating with logistics companies and making strategies that give mutual benefit for all stakeholders. Another research in Nigeria found that independent variables such as labor expenses, marketing, and distribution costs all had varying degrees of relevance in affecting profitability, with marketing and distribution costs having the greatest impact (Azu & et al, 2017).

1.3 Training Expense

According to research from India's IBS Business School, organizations are increasing sales staff productivity not by acquiring the most talented individuals, but by establishing with appropriate duration and type of training and inspiring existing sales personnel to improve their performance. While even top performers benefit from such realignment of salesforce training and incentives, sales personnel of lesser quality will also benefit significantly (Madhani, 2017). Training is needed because the knowledge and experience of salespeople are not always the same. So instead of terminating the underperformed employees, the company needs to provide a training program.

Another research in Romania found that the more a company invests in its employees, the better the promises and the better the economic performance, from the perspective of the person, the employer, and society as a whole. In the present economic climate, it is apparent and evident that investing in human capital at both the macroeconomic and microeconomic levels is becoming increasingly beneficial. The return on investment in human capital must be based on the individual's worth, which is determined by the length of time spent at the job, the quality of the work performed, and the contribution made over time (Maria, 2018).

1.4 Return on Equity

According to a study done by Sam Ratulangi University, return of equity has no effect on the price of shares listed on the Jakarta Stock Exchange and is hence unrelated to price fluctuations (Egam & et al, 2017). In some cases, the return of equity does not always impact directly on the share price. The share price is influenced by other factors such as market sentiment. Another research from Jiangsu University found that operational efficiency has an impact on return on equity (Kong & et al, 2019). In the context of Syariah banking in Indonesia, research from Muhammadiyah University in Jakarta found that capital adequacy ratio, non-performing financing, BOPO (operating cost to revenue), financing deposit ratio, currency rate, and inflation all had a substantial impact on return on equity (Idrus, 2018).

1.5 Gross Domestic Product

Gross Domestic Product or GDP is the total amount of all final goods and services produced in an economy during a given period (Krugman, 2017) The Gross Domestic Product growth could be seen from the increase in the percentage from quarter to quarter. The GDP has four components namely private and public consumptions, trade balance (import and export), investment, and government spending. GDP measures the total value of all goods and services in a country. Most of us are part of the gross domestic product. For instance, your car, a cup of coffee you purchase, your salary, etc. However, GDP only focused on manufacturing and goods. It doesn't include high tech consumption, well-being consumption, charity.

1.6 Extraordinary Condition

An example is research undertaken by American universities on the impact of hurricanes in the region. The researchers look at the factors that influence how nonrecurring earnings and losses are reported in government settings. Natural catastrophe reporting, court settlements, and gains or losses on asset sales are all examples of nonrecurring items. They also discover that nonrecurring elements are not wholly transitory, implying that political judgment plays a role in reporting. Evidence examining the implications of reporting nonrecurring items suggests that they are used to reduce or smooth both surpluses and deficits, particularly when state laws allow voters to directly place initiatives on the ballot box or mandate balanced budget laws, as well as prior to the issuance of new public bonds (Chen & et al, 2020).

1.7 Share Return

The outcomes or advantages achieved by shareholders as a consequence of investment are referred to as stock returns (Martina, 2018). According to a study undertaken by North Sumatra University, the quick ratio, debt to equity ratio, earnings per share, price to book value, and return of equity of Indonesian banking organizations all have a substantial impact on stock returns, but only partially. Variables such as earnings per share and price to the book have a favorable and large impact on stock returns (Martina, 2018). Nevertheless, a study from Pandanaran University found that return on an asset only had a half favorable impact on share

performance. Return on equity, on the other hand, is insignificant and has a positive influence on share price (Aryaningsih & et al, 2017).

1.8 Research Framework

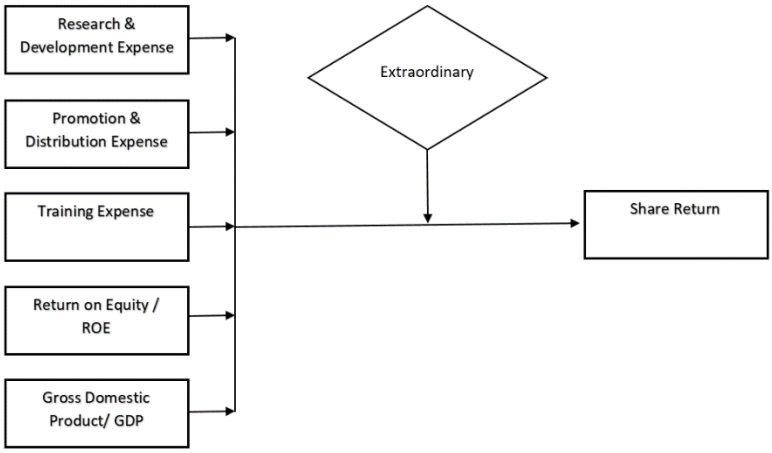


**Figure 1 : Research Framework**

**Table 1 : Name of variables**

| Variable type | Variable Name | Code |
|---|---|---|
| Dependent Variable | Share return | Y |
| Independent Variable | Research & Development Expense | X1 |
| | Promotion & Distribution Expense | X2 |
| | Training Expense | X3 |
| | Return On Equity / ROE | X4 |
| | Gross Domestic Product / GDP | X5 |
| Moderating Variable | Extraordinary Condition | X6 |

1.9 Hypothesis

Based on the theoretical and conceptual framework, the hypotheses of this study are as follows:

H1 : Research & Development Expense, Promotion & Distribution Expense, Training Expense, Return on Equity, Gross Domestic Product have a partial and simultaneous effect on share return on pharmaceutical companies listed on the Indonesian Stock Exchange in the period 2010 – Q2 2021

H2 : Extraordinary condition is able to moderate the relationship between Research & Development Expense, Promotion & Distribution Expense, Training Expense, Return on Equity, Gross Domestic Product with share return on pharmaceutical companies listed on the Indonesian Stock Exchange in the period 2010 – Q2 2021.

## RESEARCH METHOD

For this study, only secondary data was employed. The information gathered from company's financial report. The researcher will examine financial reports from pharmaceutical public relations companies.

**Table 2 : Source of data**

| Type of data | Description | Sources |
|---|---|---|
| Secondary Data | Collected materials | Financial Report from 2010 until Q2 2021 |

The process of gathering, modeling, and analyzing data in order to derive insights that aid decision-making is known as data analysis. Depending on the business and the goal of the analysis, there are a variety of methodologies and strategies for doing it. Data is used by management to make decisions that are based on facts rather than intuition. The analysis technique used is multiple linear regression analysis with descriptive statistics and classic assumptions test. The promotion and distribution expense originally separated in one company but in the second company is combined. In order to get the same result of analysis, the author also combined the report of the first company. All the expenses are divided with net sales to get the ratio.

**RESULT AND DISCUSSION**

**Table 3 : Mean Median Maximum Minimum Result**

Date: 12/25/21 Time: 14:11 Sample: 1 92

| | SR | RDE | PDE | TRE | ROE | GDP | COVID_19 |
|---|---|---|---|---|---|---|---|
| Mean | 0.124977 | 0.015955 | 0.084397 | 0.001829 | 0.046103 | 4.787174 | 0.130435 |
| Median | 0.037848 | 0.010966 | 0.091943 | 0.001327 | 0.040908 | 5.185000 | 0.000000 |
| Maximum | 2.004926 | 0.039055 | 0.170544 | 0.012992 | 0.240385 | 7.380000 | 1.000000 |
| Minimum | -0.583562 | 5.06E-05 | 0.016424 | 0.000116 | -0.125386 | -4.190000 | 0.000000 |
| Std. Dev. | 0.454251 | 0.015030 | 0.032011 | 0.002004 | 0.095752 | 2.580023 | 0.338627 |
| Observations | 92 | 92 | 92 | 92 | 92 | 92 | 92 |

| | |
|---|---|
| | DEPENDENT VARIABLE |
| SR | STOCK RETURN |
| | INDEPENDENT VARIABLE |
| RDE | RESEARCH & DEVELOPMENT EXPENSE |
| PDE | PROMOTION & DISTRIBUTION EXPENSE |
| TRE | TRAINING EXPENSE |
| ROE | RETURN OF EQUITY |
| GDP | GROSS DOMESTIC PRODUCT |
| | INDPENDENT AND MODERATING VARIABLE |
| COVID 19 | EXTRAORDINARY CONDITION |

The above table shows that the observed data are 92 data obtained from two pharmaceutical companies listed on the Indonesia Stock Exchange. The data is processed using panel data regression and according to this table there is one dependent variable, five independent variable and one mediating variable.

**Table 4 : Correlation result**

Correlation

| | TRAININGE | STOCKRET | ROE_X4 | RNDEXPEN | PROMOTIO | GDP_X5 | COVID_19 |
|---|---|---|---|---|---|---|---|
| TRAINI | 1.000000 | -0.115330 | -0.163468 | -0.216466 | 0.229369 | 0.277755 | -0.175534 |
| STOCK | -0.115330 | 1.000000 | -0.125677 | -0.140367 | -0.285295 | 0.122874 | 0.054823 |
| ROE_X4 | -0.163468 | -0.125677 | 1.000000 | 0.826190 | 0.352006 | 0.088358 | -0.044240 |
| RNDEX | -0.216466 | -0.140367 | 0.826190 | 1.000000 | 0.439642 | 0.155501 | -0.139710 |
| PROMO | 0.229369 | -0.285295 | 0.352006 | 0.439642 | 1.000000 | 0.296866 | -0.277740 |
| GDP_X5 | 0.277755 | 0.122874 | 0.088358 | 0.155501 | 0.296866 | 1.000000 | -0.711995 |
| COVID_ | -0.175534 | 0.054823 | -0.044240 | -0.139710 | -0.277740 | -0.711995 | 1.000000 |

The table shows correlation between independent and dependent variable used in this study.

1. The correlation between dependent variable stock return and research & development expense is – 0.140 that shows weak and negative.
2. The correlation between dependent variable stock return and promotion & distribution expense is – 0.285 that shows weak and negative.
3. The correlation between dependent variable stock return and training expense is – 0.115 that shows weak and negative.
4. The correlation between dependent variable stock return and Gross Domestic Product is 0.122 that shows weak and positive.
   The correlation between dependent variable stock return and covid 19 is 0.054 that shows weak and positive

**Table 5 : Correlation result between variables**

Date: 12/25/21 Time: 20:23
Sample: 1 92

| | STOCKRET | RNDEXPEN | PROMOTIO | TRAININGE | ROE_X4 | GDP_X5 | COVID_19 |
|---|---|---|---|---|---|---|---|
| Mean | 0.124977 | 0.015955 | 0.084397 | 0.001829 | 0.046103 | 4.787174 | 0.130435 |
| Median | 0.037848 | 0.010966 | 0.091943 | 0.001327 | 0.040908 | 5.185000 | 0.000000 |
| Maximum | 2.004926 | 0.039055 | 0.170544 | 0.012992 | 0.240385 | 7.380000 | 1.000000 |
| Minimum | -0.583562 | 5.06E-05 | 0.016424 | 0.000116 | -0.125386 | -4.190000 | 0.000000 |
| Std. Dev. | 0.454251 | 0.015030 | 0.032011 | 0.002004 | 0.095752 | 2.580023 | 0.338627 |
| Skewness | 2.271104 | 0.268206 | -0.321643 | 3.808000 | 0.269784 | -2.042754 | 2.194691 |
| Kurtosis | 8.728898 | 1.344949 | 2.656443 | 20.22459 | 2.069299 | 6.547848 | 5.816667 |
| Jarque-Bera | 204.8991 | 11.60323 | 2.038752 | 1359.644 | 4.436466 | 112.2346 | 104.2677 |
| Probability | 0.000000 | 0.003023 | 0.360820 | 0.000000 | 0.108801 | 0.000000 | 0.000000 |
| Sum | 11.49791 | 1.467827 | 7.764539 | 0.168274 | 4.241473 | 440.4200 | 12.00000 |
| Sum Sq. Dev. | 18.77728 | 0.020556 | 0.093246 | 0.000366 | 0.834334 | 605.7431 | 10.43478 |
| Observations | 92 | 92 | 92 | 92 | 92 | 92 | 92 |

This analysis is to determine the description of the data such as mean, minimum value, maximum value and standard deviation. The result of the descriptive analysis can be seen in the appendix. It can be seen that for variable Y the amount of data is 92 and the average value is 0.124 and etc for other variables.

The normality test in the regression model is used to test whether the residual value is normally distributed or not. A good regression model is one that has a normally distributed residual value. The decision-making criteria are :

If the probability value > 0.05, then the residual data is normally distributed
If the probability value < 0.05, then the residual data is not normally distributed.

The test result is as follows :

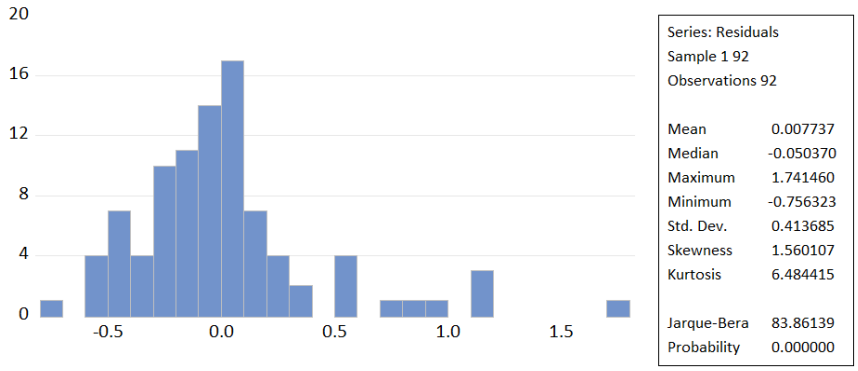


**Figure 2 : Normality test**

From the output, it can be seen that the probability value of 0.000 is less than 0.05, so it can be conclude that the data in this study are not normally distributed.

According to Ghozali (Ghozali I. , Aplikasi Analisis Multivariat Dengan Program IBM SPSS 23, 2016) which states that if the assumption of residual normality is violated, the statistical test becomes invalid for a small sample size. So if the sample is large (more than 30 according to Santoso (Santoso, 2013) ), then the regression results are still valid.

Because the amount of data is above 30, it is close to the normal distribution according to the central limit theory. The central limit theorem states that for an approximation to the normal distribution, the sample means distribution does not require a large sample. With a sample of 30, there has been an approach to the normal distribution. (Fischer, 2011)

Multicollinearity is a condition where there is a perfect or close linear relationship between independent variables in the regression model. A regression model is said to have multicollinearity if there is a perfect linear function on some or all of the independent variables in the linear function and the result are difficult to obtain the influence between the independent and dependent variables. The way to find out whether there are symptoms of multicollinearity is by looking at the Variance Inflation Factor (VIF) value, if the VIF value is less than 10 then it is declared that there is no multicollinearity.

The result is as follows :

**Table 6 : Variance Inflation Factors**

Variance Inflation Factors
Date: 12/25/21 Time: 20:10
Sample: 1 92
Included observations: 92

| Variable | Coefficient Variance | Uncentered VIF | Centered VIF |
|---|---|---|---|
| RNDEXPENSE_X1 | 33.28706 | 8.035640 | 3.756307 |
| PROMOTIONNDISTE | 2.907532 | 11.94771 | 1.488304 |
| TRAININGEXPENSE | 651.1393 | 2.406757 | 1.306588 |
| ROE_X4 | 0.701697 | 3.967112 | 3.213871 |
| GDP_X5 | 0.000656 | 9.775093 | 2.181634 |
| COVID_19 | 0.036266 | 2.388989 | 2.077382 |
| C | 0.034135 | 17.23944 | NA |

It can be seen that there is no multicollinearity problem, this can be seen from the VIF value on the centered VIF for the five independent variables less than 10.

Heteroscedasticity is a condition where there is an inequality of variance from the residuals for all observations in the regression model. There are several ways to test whether the regression model that we use passes the heteroscedasticity. In detecting the presence or absence of heteroscedasticity problems, the research that we uses the Glejser test, which is regressing the absolute value (AbsRes) with the independent variable. The provision used, if the probability value of chi-square > 0.05 then the null hypothesis is accepted which means that there is no heteroscedasticity problem in the model.

**Table 7 : Heteroskedasticity Test**

Heteroskedasticity Test: Glejser
Null hypothesis: Homoskedasticity

| | | | |
|---|---|---|---|
| F-statistic | 6.010705 | Prob. F(6,85) | 0.0000 |
| Obs*R-squared | 27.40619 | Prob. Chi-Square(6) | 0.0001 |
| Scaled explained SS | 37.48037 | Prob. Chi-Square(6) | 0.0000 |

Test Equation:
Dependent Variable: ARESID
Method: Least Squares
Date: 12/25/21 Time: 17:45
Sample: 1 92
Included observations: 92

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| C | 0.493780 | 0.113222 | 4.361173 | 0.0000 |
| RNDEXPENSE_X1 | -5.666002 | 3.535652 | -1.602534 | 0.1127 |
| PROMOTIONNDISTEXPENSE_ | -2.161832 | 1.044946 | -2.068845 | 0.0416 |
| TRAININGEXPENSE_X3 | -15.90417 | 15.63755 | -1.017050 | 0.3120 |
| ROE_X4 | -0.489936 | 0.513342 | -0.954406 | 0.3426 |
| GDP_X5 | 0.021525 | 0.015697 | 1.371313 | 0.1739 |
| COVID_19 | 0.071520 | 0.116702 | 0.612845 | 0.5416 |

| | | | |
|---|---|---|---|
| R-squared | 0.297893 | Mean dependent var | 0.281624 |
| Adjusted R-squared | 0.248333 | S.D. dependent var | 0.301682 |
| S.E. of regression | 0.261555 | Akaike info criterion | 0.228689 |
| Sum squared resid | 5.814917 | Schwarz criterion | 0.420564 |
| Log likelihood | -3.519692 | Hannan-Quinn criter. | 0.306131 |
| F-statistic | 6.010705 | Durbin-Watson stat | 1.741385 |
| Prob(F-statistic) | 0.000028 | | |

From the output, it can be seen that there is a heteroscedasticity problem. This is because the probability of chi square is less than 0.05.

Autocorrelation is a condition where in the regression model there is a correlation between the residuals in period t and residuals in the previous period (t-1). A good regression model is one in which there is no autocorrelation problem. The autocorrelation test can be done by using the Durbin Watson (DW) test, the decision-making criteria are as follows (Trihendradi, 2013).
1.65 < DW < 2.35 : means that there is no autocorrelation
1.21 < DW < 1.65 or 2.35 < DW < 2.79 : means that it cannot be concluded
DW < 1.21 or DW > 2.79 means that there is an autocorrelation

**Table 8 : Autocorrelation test**

Dependent Variable: STOCKRETURN Y
Method: Least Squares
Date: 12/25/21 Time: 17:31
Sample: 1 92
Included observations: 92

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| RNDEXPENSE X1 | -1.099491 | 5.699599 | -0.192907 | 0.8475 |
| PROMOTIONNDISTEXPENSE | -3.237599 | 1.441831 | -2.245477 | 0.0273 |
| TRAININGEXPENSE X3 | -33.73481 | 25.44092 | -1.326006 | 0.1883 |
| ROE X4 | -0.292741 | 0.816976 | -0.358323 | 0.7210 |
| GDP X5 | 0.089085 | 0.019754 | 4.509625 | 0.0000 |
| COVID 19 | 0.435172 | 0.142136 | 3.061663 | 0.0029 |

| | | | |
|---|---|---|---|
| R-squared | 0.170337 | Mean dependent var | 0.124977 |
| Adjusted R-squared | 0.122100 | S.D. dependent var | 0.454251 |
| S.E. of regression | 0.425616 | Akaike info criterion | 1.192436 |
| Sum squared resid | 15.57882 | Schwarz criterion | 1.356900 |
| Log likelihood | -48.85204 | Hannan-Quinn criter. | 1.258815 |
| Durbin-Watson stat | 1.500926 | | |

From the output above, it can be seen that there is an autocorrelation problem, this is because the Durbin Watson (DW) value of 1.500 is in the range of 1,21 – 1.65 which indicates there is no conclusion.

Note : the results of the classical assumption test show heteroscedasticity and autocorrelation problems. With this, the standard error correction method is carried out using the Newey – west method (HAC Method) (Ghozali & Ratmono, 2017) This Newey – west method can correct autocorrelation and heteroscedasticity problems simultaneously (Gujarati, 2003).

**Table 9 : Result of linear regression**

Dependent Variable: STOCKRETURN_Y
Method: Least Squares
Date: 12/25/21 Time: 19:04
Sample: 1 92
Included observations: 92
HAC standard errors & covariance (Bartlett kernel, Newey-West fixed bandwidth = 4.0000)

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| RNDEXPENSE_X1 | -1.667791 | 3.076998 | -0.542019 | 0.5892 |
| PROMOTIONNDISTEXPENSE_ | -3.890115 | 1.526566 | -2.548279 | 0.0126 |
| TRAININGEXPENSE_X3 | -33.35644 | 33.10623 | -1.007558 | 0.3165 |
| ROE_X4 | -0.166648 | 0.589451 | -0.282718 | 0.7781 |
| GDP_X5 | 0.077363 | 0.037878 | 2.042410 | 0.0442 |
| COVID_19 | 0.344002 | 0.286033 | 1.202666 | 0.2324 |
| C | 0.133375 | 0.277772 | 0.480161 | 0.6323 |

| | | | |
|---|---|---|---|
| R-squared | 0.175392 | Mean dependent var | 0.124977 |
| Adjusted R-squared | 0.117185 | S.D. dependent var | 0.454251 |
| S.E. of regression | 0.426806 | Akaike info criterion | 1.208062 |
| Sum squared resid | 15.48389 | Schwarz criterion | 1.399938 |
| Log likelihood | -48.57087 | Hannan-Quinn criter. | 1.285505 |
| F-statistic | 3.013220 | Durbin-Watson stat | 1.513875 |
| Prob(F-statistic) | 0.010172 | Wald F-statistic | 1.536524 |
| Prob(Wald F-statistic) | 0.176112 | | |

The output results of the linear regression model using the HAC method are as follows:

Regression Equation

Linear regression analysis was used to determine the effect of the independent variable on the dependent variable either partially (t test) or jointly (F test). Regression equations are used to formulate equations and to determine the value of the increase or decrease in variable Y for changes in variable X. The general form of the linear regression equation is as follows :

$$Y = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + e$$

The regression equation is as follows:

$$Y = 0{,}133 - 1{,}677X_1 - 3{,}890X_2 - 33{,}356X_3 - 0{,}166X_4 + 0{,}077X_5 + 0{,}344X_6$$

T Test

The T-test was used to determine whether the regression model of the independent variable partially had a significant effect on the dependent variable.

Hypothesis:
Ho : There is no partial effect of X1, X2, X3, X4, X5 and X6 on Y
Ha : There is a partial effect of X1, X2, X3, X4, X5 and X6 on Y

Decision making criteria:
Ho is accepted if probability > 0.05 (no effect)
Ho is rejected if probability < 0.05 (effective)

Conclusion as follows:

1. Variable X1 partially has no effect on Y. This is because the probability value is > 0.05 (0.589 > 0.05) So that Ho is accepted and Ha is rejected.
2. Variable X2 partially affect Y. This is because the probability value is < 0.05 (0.012 < 0.05) So that Ho is rejected and Ha is accepted.
3. Variable X3 partially has no effect on Y. This is because the probability value is > 0.05 (0.316 > 0.05) So that Ho is accepted and Ha is rejected.
4. Variable X4 partially has no effect on Y. This is because the probability value is > 0.05 (0.778 > 0.05) So that Ho is accepted and Ha is rejected.
5. Variable X5 partially affect Y. This is because the probability value is < 0.05 (0.044 < 0.05) So that Ho is rejected and Ha is accepted.
6. Variable X6 partially has no effect on Y. This is because the probability value is > 0.05 (0.232 > 0.05) So that Ho is accepted and Ha is rejected.

F Test result

The F test is used to determine whether the independent variables together have a significant effect on the dependent variable.
Hypothesis:
Ho : There is no effect of X1, X2, X3, X4, X5 and X6 together on Y
Ha : There is an effect of X1, X2, X3, X4, X5 and X6 together on Y
Decision-making criteria :
Ho is accepted if probability > 0.05 (no effect)
Ho is rejected if probability < 0.05 (effective)
Conclusion as follows :
Variable X1, X2, X3, X4, X5 and X6 together has an effect on Y. This is because the probability value <0.05 (0.010 > 0.05) so Ho is rejected and Ha is accepted.

Determination analysis results (Adjusted R Square) :

Analysis of determination is a measure that shows how much variable X contributes to variable Y. Determination analysis is used to determine the percentage contribution of the influence of the independent variable simultaneously on the dependent variable. It can be seen that the variables X1, X2, X3, X4, X5 and X6 together have an influence on Y of 0.117 or 11,7 % and the rest are influenced by other factors not examined.

Based on the analysis, below is the summarize

**Table 10 : Hypothesis**

| Hypothesis | Research Findings | Remarks |
|---|---|---|
| Hypothesis :<br>Ha : There is a partial effect of X1, X2, X3, X4, X5 and X6 on Y | Variable X2 partially affects Y. This is because the probability value is < 0.05 (0.012 < 0.05) So that Ho is rejected and Ha is accepted<br>Variable X5 partially affect Y. This is because the probability value is < 0.05 (0.044 < 0.05) So that Ho is rejected and Ha is accepted. | There is an effect between share return with promotion & distribution expense and gross domestic product |
| Ha : There is an effect of X1, X2, X3, X4, X5, and X6 together on Y | Variable X1, X2, X3, X4, X5 and X6 together has an effect on Y. This is because the probability value <0.05 (0.010 > 0.05) | There is an effect between share return with all independent variable |

From the hypothesis we could learn that independent variable which is Promotion & distribution expense and also gross domestic product effect the share return. Whereas other variables such as research & development expense, training expense, and return of equity do not have a significant impact on the share return of pharmaceutical companies listed in the Jakarta Stock Exchange.

## CONCLUSION AND RECOMMENDATION

This study has ten research questions 1) How is the impact of research and development expense to share return 2) How is the impact of promotion and distribution expense to share return 3) How is the impact of training expense to share return 4) How is the impact of return on equity to share return 5) how is the impact of gross domestic product to share return 6) How is the impact of covid 19 to research & development expense 7) How is the impact of covid 19 to promotion and distribution expense 8) How is the impact of covid 19 to training expense 9) How is the impact of covid 19 to return on equity 10) How is the impact of covid 19 to gross domestic product. To answer the questions, the study use a normality test but the output showed that the probability value is less than 0.05, meaning that the data in this study is not normally distributed. However, the central limit theorem states that for an approximation to the normal distribution, the sample means distribution does not require a large sample. With a sample of 30, there has been an approach to the normal distribution. (Fischer, 2011)

Because the amount of data is above 30, it is close to the normal distribution according to this central limit theory.

Based on the result analysis, research & development expense, training expenses and return on equity are not impact to share return. However, the study showed that promotion & distribution expense and gross domestic product influence share return as shown from T Test.

Based on F test result, the probability (F-statistic) is 0.010 that less than 0.05. Meaning that research & development expense, promotion & distribution expense, training expense, return on equity and gross domestic product together has an effect on share return. This is because the probability value <0.05 (0.010 > 0.05) so Ho is rejected and Ha is accepted.

Based on the adjusted R-squared value is 0.117 that can be interpreted that independent variable in this research: research & development expense, promotion & distribution expense, training expense, return on equity, gross domestic product and extraordinary condition such as covid 19 could impact the dependent variable in this study which is share return for 11,7 % and the rest of 88.3 % is influenced by other factors outside this study.

Therefore, the conclusion of the study is Gross Domestic Product is the one that significantly impacts the share return with the coefficient rate of 0.07 and covid 19 is not influence the expenses. The study has a limitation. The focus of the study only relied on the data from two pharmaceutical companies listed in the Jakarta Stock Exchange although it is consisted of state-owned companies and public company.

Recommendations for Further Research

Based on the limitations of this study, there are several suggestions for researchers who want to continue and develop this study, namely:

1. The study only focused on two companies listed on the Jakarta Stock Exchange. The next study could be conducted using more companies to get a detailed analysis.
2. The study only focused on the pharmaceutical industry. There are other companies in different sectors and industries that obviously faced the same condition however the movement of the share return could be influenced by another factor.

Recommendations for Investors

Investors are encouraged to analyze stock return rates and expenses that are either budgeted or unbudgeted by the companies. The budget expense shows that that company has a good business strategy, especially in their resource allocation.

Recommendations for Regulator

For the government and regulators, the more comprehensive study will assist them to review the regulation and set reasonable limit of share price movement.

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