

**THE EFFECT OF WORKING CAPITAL, PRODUCTION COSTS, OPERATIONAL COSTS, DISTRIBUTION, AND SALES COSTS ON NET PROFIT  
(In Pharmaceutical Subsector Companies Listed on the Indonesia Stock Exchange in 2014-2021)**

**Nurul Hafizah<sup>1</sup>, Muhammad Iqbal Alamsyah<sup>2</sup>**  
Universitas Indonesia Membangun<sup>1,2</sup>  
hanufi2999@gmail.com<sup>1</sup>, Muhammad.iqbalal@inaba.ac.id<sup>2</sup>

**ABSTRACT**

*The research method used in this study is a descriptive and verification research method. The data used is secondary data. Data collection uses library research and documentation obtained from the official website of the Indonesia Stock Exchange. Sampling used a purposive sampling method and obtained data from 2014 – 2021 The pharmaceutical industry sub-sector is listed on the Indonesia Stock Exchange. The data analysis technique used in this study is the classical assumption test, multiple regression analysis, correlation coefficient analysis, determination coefficient analysis, and hypothesis testing. The results of the study show that working capital has a significant effect on net income. This statement is proven by the results of the t test which produces  $t \text{ count} > t \text{ table}$  of  $4.393 > 2.030$  with a significance level of  $0.00 < 0.05$ . Production Costs have no effect on Net Income. This statement is proven by the results of the t test which produces  $t \text{ count} < t \text{ table}$  of  $1.055 < 2.030$  with a significance level of  $0.299 > 0.05$ .*

**Keywords:** *Working Capital, Production Costs, Operational Costs, Distribution Costs, Sales, Net Income*

**INTRODUCTION**

In Indonesia, Pharmacy is a promising sector. As a result of increased demand, the government has included the medical device and pharmaceutical sectors as part of the priority sectors in an effort to realize the Making Indonesia 4.0 program. The Indonesian government is trying to increase the competitiveness of the medical device and pharmaceutical sectors by encouraging

the implementation of technology-based digital transformation. For example, a state-owned pharmaceutical holding company has taken advantage of digital technology from the production process to distribution, the company uses the most connected system to grow the network; carry out digital administration processes; and encourage the realization of more effective and efficient performance.

On a different occasion, the Ministry of Industry (Menperin) Agus Gumiwang focused on realizing the pharmaceutical and medical device industry so that it can become an independent sector in the country, meaning that it is able to meet the needs of the domestic community so that it can gradually reduce dependence on imported products. Thus, investors can invest in import substitute goods while encouraging the use of raw materials and intermediary materials originating from within the country. The race to develop a Covid – 19 vaccine has been encouraging many countries are investing more heavily in health research programs and procuring vitamins, supplements and immune-boosting drugs. From 2015 to 2021, the number of companies producing medical devices increased from 193 to 891 companies with a percentage of 361.66 percent. The quality of domestic Darmasis products is recognized worldwide. The trade sector continues to post a positive record.

## **LITERATURE REVIEW**

According to Sugiyono (2020: 85) Literature review is a research activity that aims to carry out a serious study of theories

and concepts related to the topic to be studied.

### **Net profit**

According to Kasmir (2020: 303) net profit (net profit) is profit that has been deducted by costs which are a burden on the company in a certain period including taxes.

### **Working Capital**

According to Sujarweni (2020: 186), Working capital is a company investment in the form of cash, securities, receivables and inventories, reduced by current liabilities used to finance current assets. Working capital focuses more on current assets or is referred to as gross working capital which consists of components of cash, securities, receivables, inventories and financing.

### **Production cost**

According to Mulyadi (2020:14), Production Costs are costs incurred to process raw materials into finished products that are ready for sale.

### **Operating costs**

According to Sujarweni (2020:28) Operational Costs are “costs used to get

the main income. Operational costs are costs that are directly related to the company's needs every day outside the production process.

#### Distribution Fees

According to Mulyadi (2020: 488) are: "Distribution costs are part of the overall marketing costs which include: Transportation costs (this transportation cost is a set of costs which includes: public transportation costs and contracts such as train fees, truck rental fees, fleet maintenance costs, air freight costs and sea freight costs Administration distribution costs.

#### Sale

According to Mulyadi (2020: 160) Sales are "Activities carried out by sellers in selling goods and services with the dream of getting profits from these transactions and sales can be interpreted as transferring or transferring ownership rights to goods or services from the seller to the buyer. .

### **METHODS**

The method used in this study is a descriptive and verification method with a

quantitative approach because by using this research method a significant relationship between the variables studied will be identified so that the conclusions will clarify the description of the object under study.

According to Sugiyono (2020: 7) The descriptive method is research conducted to describe independent variables, either only on one variable or more (stand-alone variables) without making comparisons and looking for that variable with other variables.

Meanwhile, the verification method according to Sugiyono (2020: 8) is defined as research conducted on certain populations or samples with the aim of testing hypotheses that have been determined late.

### **RESULT AND DISCUSSION**

#### **Descriptive Statistical Analysis Descriptive Statistical Analysis of Net Income**

The maximum value of the study net profit in the pharmaceutical sub-sector for 2014-2021 on the Indonesia Stock Exchange is 22,104,364, namely for PT Prydam Farma

Tbk in 2020. The average value of net profit for pharmaceutical sub-sector companies for 2014-2021 is 2,167,850. Meanwhile, the standard deviation of Net Profit for Pharmaceutical Subsector Companies in 2014-2021 is 2,037,655.

### **Working Capital Descriptive Statistical Analysis**

The minimum value of Working Capital occurs in Pharmaceutical Subsector Companies in 2014-2021, namely - 693,837, namely at PT Kimia Farma Tbk in 2020. The maximum value of Study Working Capital in the Pharmaceutical Subsector for 2014-2021 on the Indonesia Stock Exchange is 12,177,553, namely at PT Kalbe Farma Tbk in 2021. The average value of working capital in pharmaceutical sub-sector companies in 2014-2021 is 1,943,295.

Meanwhile, the standard deviation of Working Capital in Pharmaceutical Subsector Companies in 2014-2021 is 1,537,106.

### **Production Cost Descriptive Statistical Analysis**

The minimum value of production costs occurs in pharmaceutical sub-sector companies in 2014-2021, which is 9.318, namely at PT Kimia Farma Tbk in 2018. The maximum value for production costs for studies in the pharmaceutical sub-sector for 2014-2021 on the Indonesia Stock Exchange is 255,122,736, namely PT Prydam Farma Tbk year 2021.

The average value of production costs in pharmaceutical sub-sector companies for 2014-2021 is 15,483,189.75. Meanwhile, the standard deviation of Production Costs for Pharmaceutical Subsector Companies in 2014-2021 is 13,968,027,470.

### **Descriptive Statistical Analysis of Operational Costs**

The minimum value for Operational Costs occurs in Pharmaceutical Subsector Companies in 2014-2021, which is - 294,733, namely PT Organon Pharma Indonesia Tbk in 2014.

The maximum value of Study Operational Costs in the 2014-2021 Pharmaceutical Subsector on the Indonesia Stock Exchange is 39,586,425, namely at PT Prydam Farma Tbk in 2021. The average value of Operational Costs in

Pharmaceutical Subsector Companies for 2014-2021 is 3,315,257. Meanwhile, the standard deviation of Operational Costs for Pharmaceutical Subsector Companies in 2014-2021 is 2,854,291.

### **Distribution Cost Descriptive Statistical Analysis**

The minimum value of Distribution Costs occurs in Pharmaceutical Subsector Companies in 2014-2021, which is 6,256, namely PT Organon Pharma Indonesia Tbk in 2015.

The maximum value of Study Distribution Costs for the 2014-2021 Pharmaceutical Subsector on the Indonesia Stock Exchange is 5,331,457, namely for PT Organon Pharma Indonesia Tbk in 2020. The average value of Operational Costs for Pharmaceutical Subsector Companies for 2014-2021 is 658,841. Meanwhile, the standard deviation of Distribution Costs for Pharmaceutical Subsector Companies in 2014-2021 is 620,068.89.

### **Sales Descriptive Statistical Analysis**

The minimum value of Sales occurred in Pharmaceutical Subsector Companies in 2014-2021, namely 578,139, namely at PT

Phapros Tbk in 2014. The maximum value of Study Sales in the Pharmaceutical Subsector in 2014-2021 on the Indonesia Stock Exchange was 630,530,235, namely at PT Prydam Farma Tbk in 2021.

The average value of sales in pharmaceutical sub-sector companies for 2014-2021 is 63,424,747. Meanwhile, the standard deviation of sales for pharmaceutical sub-sector companies in 2014-2021 is 57,263,458.

### **Verification Statistical Analysis of Classical Assumption Test Results**

#### **Normality test**

Based on that the Kolmogorov-Smirnov normality test in this study was  $0.061 > 0.05$ .

A significance value greater than 0.05 indicates that the data in this study are normally distributed,

#### **Multicollinearity Test**

Based on the test results, it is known that the tolerance value for Working Capital is  $0.933 > 0.10$ , while VIF is  $1.071 < 10$ , the tolerance value for Production Costs is  $0.579 > 0.10$ , while VIF is  $1.728 < 10$ , the

tolerance value for Operational Costs is  $0.304 > 0.10$ , while VIF  $3.290 < 10$ , distribution cost tolerance value  $0.492 > 0.10$ , while VIF  $2.032 < 10$  and sales tolerance value  $0.374 > 0.10$ , while VIF  $2.671 < 10$  all variables are less than 10 so it can be concluded that there is no multicollinearity problem in the regression model.

### **Heteroscedasticity Test**

The results of the heteroscedasticity test showed that the points spread above and below the number 0 on the X and Y axes, this indicates that in this study there was no heteroscedasticity.

### **Autocorrelation Test**

The autocorrelation test is a statistical analysis to find out the linear regression model between the variable errors in the prediction model with changes in time. According to Sunyoto (2019: 98), one of the measures to determine whether there is an autocorrelation problem can use the Durbin-Watson (DW) scale

which can be seen as follows:

1. If  $DW > DL$  or greater than  $(4 - DL)$ , then the null hypothesis is rejected, which means there is autocorrelation.
2. If DW lies between DU and  $(4 - DU)$ , then the null hypothesis is accepted which means there is no autocorrelation.

Autocorrelation test results on the data using the help.

### **Multiple Linear Regression Test Results**

Based on the results of the multiple regression equation, each variable can be interpreted as follows:

- a) The constant value is negative 12.453, which indicates that if the variables Working Capital (X1), Production Costs (X2), Operating Costs (X3), Distribution Costs (X4), Sales (X5) do not change or equal to 0 then Net Profit (Y) is -12.453.
- b) The regression coefficient of the Working Capital variable has a regression coefficient of 0.306, meaning that if the Working Capital variable increases by one unit, the other independent variables, namely Production Costs (X2), Operational

- Costs (X3), Distribution Costs (X4) and Sales (X5) are considered constant (value 0), then the dependent variable, namely net profit, will increase by 0.306.
- c) The regression coefficient of the Production Cost variable has a regression coefficient of -0.076, meaning that if the Net Profit variable increases by one unit, while the other independent variables, namely Working Capital (X1), Operating Costs (X3), Distribution Costs (X4) and Sales (X5) are considered constant (value 0), then the dependent variable, namely Net Income, will decrease by 0.076.
- d) The regression coefficient of the Operating Costs variable has a regression coefficient of -0.111, meaning that if the Operating Costs variable increases by one unit, the other independent variables are Working Capital (X1), Production Costs (X2), Distribution Costs (X4) and Sales (X5) considered constant (value 0), then the dependent variable, namely net income, will decrease by 0.111.
- e) The regression coefficient of the Distribution Costs variable has a regression coefficient of 0.297, meaning that if the Distribution Costs variable increases by one unit, the other independent variables, namely Working Capital (X1), Production Costs (X2), Operational Costs (X3) and Sales (X5) are considered constant (value 0), then the dependent variable, namely net profit, will increase by 0.297.
- f) The regression coefficient of the Sales variable has a regression coefficient of 0.750, meaning that if the Sales variable has increased by one unit, while the other independent variables, namely Working Capital (X1), Production Costs (X2), Operational Costs (X3) and Distribution Costs (X4) are considered constant (value 0), then the dependent variable, namely Net Income, will increase of 0.750.

#### **Pearson Correlation Coefficient Test Results (*Product Moment*)**

The partial correlation calculations show that:



1. The partial correlation between Working Capital and Net Income is 0.242. Based on the correlation criteria table, including the correlation value between 0.20 - 0.39 has a weak relationship. Because the results are positive, it can be concluded that any increase in working capital can increase net profit.
2. The partial correlation between Production Costs and Net Income is 0.546. Based on the correlation criteria table, including the correlation value between 0.40 - 0.69 has a moderate relationship. Because the results are positive, it can be concluded that any decrease in Production Costs can increase Net Income.
3. The partial correlation between Operational Costs and Net Income is 0.694.
4. Based on the correlation criteria table, the correlation value between 0.60 - 0.79 has a strong relationship. Because the results are positive, it can be concluded that any increase in Operational Costs can increase Net Income.
5. The partial correlation between distribution costs and net income is 0.636. Based on the correlation criteria table, including the correlation value between 0.60 - 0.79 has a strong relationship. Because the results are positive, it can be concluded that any increase in Distribution Costs can increase Net Income.
6. The partial correlation between sales and net income is 0.859. Based on the correlation criteria table, including the correlation value between 0.80 - 1.00 has a very strong relationship. Because the results are positive, it can be concluded that any increase in Sales can increase Net Profit.

#### **Determinant Coefficient Test Results (R<sup>2</sup>)**

The coefficient of determination (R square) is 0.845, which means that changes in net profit can be affected by changes in the working capital, production costs, operational costs, distribution and sales costs of 84.5%. This shows that there are still other factors that can improve Net Profit for Pharmaceutical Subsector Companies on the Indonesia Stock Exchange for 2014-2021 apart from the



variable Working Capital, Production Costs, Operational Costs, Distribution and Sales Costs is 15.5%, for example, fee taxes, material costs and Company Value.

### **Hypothesis test**

#### **Partial Hypothesis Testing Results (t)**

- a) shows  $t_{\text{arithmetic}} > t_{\text{table}}$ , namely  $4.393 > 2.030$ , so working capital affects net income. Because the  $t_{\text{count}} > t_{\text{table}}$  and the significance value is  $0.00 < 0.05$ ,  $H_0$  is rejected and  $H_1$  is accepted, meaning that working capital (X1) has a significant effect on net income (Y).
- b) shows  $t_{\text{count}} < t_{\text{table}}$ , namely  $1.055 < 2.030$ , so production costs do not affect net income. Because the  $t_{\text{count}} < t_{\text{table}}$  and the significance value is  $0.299 < 0.05$ ,  $H_0$  is accepted and  $H_2$  is rejected, meaning that production costs (X2) have no significant effect on net income (Y).
- c) shows  $t_{\text{arithmetic}} < t_{\text{table}}$ , namely  $-0.945 < -2.030$ , so operating costs do not affect net income. Because the  $t_{\text{count}} < t_{\text{table}}$  and the significance value is  $0.352 > 0.05$ ,  $H_0$  is accepted and  $H_3$  is rejected, meaning that

Operational Costs (X3) have no significant effect on Net Income (Y).

- d) above shows  $t_{\text{arithmetic}} > t_{\text{table}}$ , namely  $2.596 > 2.030$ , so distribution costs affect net income. Because the value of  $t_{\text{count}} > t_{\text{table}}$  and a significance value of  $0.01 < 0.05$ ,  $H_0$  is rejected and  $H_4$  is accepted,

It is) shows  $t_{\text{arithmetic}} > t_{\text{table}}$ , namely  $6.775 > 2.030$ , then sales have an effect on net income. Because the value of  $t_{\text{count}} > t_{\text{table}}$  and a significance value of  $0.000 < 0.05$ ,  $H_0$  is rejected and  $H_5$  is accepted, meaning that sales have a significant effect on net income.

#### **Results of Simultaneous Hypothesis Testing (Test F)**

Based on the calculation, the  $F_{\text{count}}$  value is 37.148. With  $\alpha = 0.05$  and degrees of freedom  $(n-k-1) = (40-5-1 = 34)$  and degrees of freedom  $(k-1) = (6-1 = 5)$ , we get  $F_{\text{table}} 2.49$ . Because the value of  $F_{\text{count}} > F_{\text{table}}$  ( $37.14 > 2.49$ ), while the significance level is  $0.00 < 0.05$  then  $H_0$  is rejected and  $H_7$  is accepted, meaning that the variables Working Capital (X1), Production Costs (X2), Operational Costs (X3), Distribution Costs (X4) and Sales

(X5) simultaneously influence to Net Income (Y).

## **CONCLUSION**

### **Verification Statistical Analysis**

#### **Effect of Working Capital on Net Income**

That there is a positive correlation between working capital and net income which means that the higher the working capital, the higher the net profit generated in the pharmaceutical sub-sector manufacturing companies listed on the Indonesia Stock Exchange in 2014-2021.

#### **Effect of Production Costs on Net Income**

If the Production Cost variable increases by one unit, while the other independent variables are considered constant (value 0), then the dependent variable, namely net income, will decrease by 0.076.

#### **Effect of Operational Costs on Net Income**

The variable Operating Costs has increased by one unit, while the other independent variables are considered

constant (value 0), then the dependent variable, namely Net Income, will decrease by 0.111.

#### **The Effect of Distribution Costs on Net Income**

that there is a positive correlation between distribution costs and net income, which means that the higher the distribution costs caused by the increase in sales volume, the higher the potential income so the net profit generated is also higher.

#### **Effect of Sales on Net Income**

That is, Net Profit will experience an increase of 0.750. This means that there is a positive correlation between sales and net income, which means that the higher the sales caused, the higher the potential income so the net profit generated will also be higher.

#### **Effect of Working Capital, Production Costs, Operational Costs, and Distribution Costs on Net Income**

The results of the calculation of the coefficient of determination of the variable Working Capital, Production Costs,

Operational Costs, and Distribution Costs on Net Income with an influence contribution of 84.5% while the remaining 15.5% is another factor outside of Working Capital, Production Costs and Operational Costs on Net Income.

The results of calculations using SPSS obtained an Fcount value of 37.148. With  $\alpha = 0.05$  and Ftable 2.49. Due to the value of Fcount > Ftable (37.14 > 2.49), while the significance level is 0.00 < 0.05 then Ho is rejected and H6 is accepted, meaning that the variable Working Capital, Production Costs, Operational Costs, Distribution Costs, Sales simultaneously have an effect to Net Income.

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