

## The Influence of Employee Productivity and Operational Costs on Increasing Revenue PT. Diamond National Iron Industry Medan

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### Abstract

This research aims to analyze the impact of employee productivity and operational costs on income growth at PT. Intan National Iron Industry Medan. The study uses multiple linear regression methods with a sample of annual financial reports from the past six years, which have been approved by the company leadership. The motivation for this research stems from fluctuations in income over the years, particularly during the pandemic, where a drastic decline was observed. The income generated was insufficient to cover operational costs, leading to unmet income targets and a lack of management incentives, or even company losses. The results of the study indicate that employee productivity has a positive and significant effect on income, with a T-value of 7.079 (T-value 7.079 > T-table 2.015) and a significance level of 0.000 < 0.05, meaning that  $H_a$  is accepted and  $H_0$  is rejected. Operational costs also have a significant impact on income, with a T-value of 3.976 (T-value 3.976 > T-table 2.015) and a significance level of 0.000 < 0.05, again leading to the acceptance of  $H_a$  and rejection of  $H_0$ . Furthermore, the combined effect of productivity and operational costs yields an F-value of 34.852 > 4.74 with a significance level of 0.000 < 0.05. These findings demonstrate that both employee productivity and operational costs positively and significantly influence income growth at PT. Intan National Iron Industry Medan.

*Keywords: Employee productivity, operational costs, income*

### INTRODUCTION

A company is an organization that operates with the aim of generating profits, by selling products (goods or services) to its customers. Profit or income is the difference between the money received from customers for the goods or services produced, and the costs incurred for the inputs used to produce the goods or services. The income earned by the company includes gross income and net income.

In managing financial problems, you should pay attention to the four main principles of corporate learning, namely profitability, liquidity, solvency and company activities (operational activities). Every company wants all the potential that exists in the company, especially regarding its resources, to be used efficiently, as well as the company must be able to pay debts if the company is liquidated.

Gross income is income obtained before deducting costs that are borne by the company. This means that the company earns the first overall income. Meanwhile, net income is income that has been deducted from costs which are the company's expenses in a certain period, including taxes. Net income is a net increase in capital. Net income is very important for a company. Where net income is used to measure the success of the company.

Company PT. Intan Nasional Iron Industri Medan is a company that operates in the field of manufacturing production, one of which is zinc, where its production is spread across various cities in Indonesia. Established in 1971 and is a subsidiary of PT. Intan Group.

**Table 1.1 Income of PT. Intan National Iron Industry Medan 2015-2021**

No	Tahun	Pendapatan (Miliar)
1.	2015	34.079.000.000
2.	2016	36.900.000.000
3.	2017	35.078.000.000
4.	2018	40.101.000.000
5.	2019	48.570.000.000
6.	2020	25.340.000.000
7.	2021	50.203.000.000

Source: Financial Report PT. Intan National Iron Industry Medan

In the data above you can see the income of PT. Intan Nasional Iron Industri Medan experienced quite varying fluctuations up and down, where in 2020 it experienced a very drastic decline due to Covid-20 where all economic activities were closed or laid off and only increased again in 2021 when economic activities began to run as they should.

The term operational is often used in a company organization that produces output, both in the form of goods and services. In general, operations are defined as a business, activity or process of transforming input into output results. In this general sense, use is quite broad, so it includes output in the form of goods and services. So in terms of production and operations, it includes every process that changes inputs and uses resources to produce outputs in the form of goods or services.

Apart from operational costs the greatest resource available to any company is the workforce it acquires and retains. The workforce in the form of human resources (HR) plays an important role in helping companies deal with the rapidly changing business environment and greater demand for quality employees in the 21st century.

HR is used to describe the people who work for a company or organization, and the company's HR department which is responsible for managing employee-related resources. Based on the definition of HR, the HR department handles the organization's most valuable assets, namely its employees. The professionalism of the HR department ensures that employees have everything they need to perform their daily tasks and is also responsible for creating a healthy and attractive work environment and retaining quality people.

The HR department is tasked with maximizing employee productivity and protecting the company from any problems that may arise in the workforce. The responsibilities of the HR department include compensation and benefits, recruitment, dismissal, and the company's relations with its employees. Research conducted by The Conference Board, has found six main activities related to people that must be carried out effectively by the HR department to add value to the company, namely: Managing and using people effectively; Tie performance appraisals and compensation to competencies; Develop competencies that improve individual and organizational performance; Increasing innovation, creativity and flexibility needed to increase competitiveness; Implement new approaches to work process design, success planning, career development, and inter-organizational mobility; Manage technology implementation and integration through increased staffing, training, and communication with employees.

HR is an important factor in all activities carried out by a company/organization to achieve optimal goals. Therefore, companies need to be supported by human resources who have high work productivity. This means that high employee work productivity will further support the achievement of company goals. Increasing employee productivity requires good management in maximizing the results achieved with basic human abilities through the division of tasks and responsibilities which

will form cooperation within the organization. The success of an organization depends on the productivity of individuals and teams.

Based on the background of the problem above, the researcher is interested in conducting research with the title "The Influence of Employee Productivity and Operational Costs on Increasing Revenue at PT. Intan National Iron Industry Medan"

### *Literature Review*

#### **2.1. Theoretical Foundations**

##### **2.1.1. Revenue**

###### **2.1.1.1. Definition of Income**

Revenue is the main goal of establishing a company. As a profit-oriented organization, income has a very large role.

###### **2.1.1.2. Income Concept**

The basic concept of income is that income is a flow process, namely the creation of goods or services by a company over a certain period of time. The current process is: At the time of completion of the main reporting activities, it is hoped that it can provide information that is useful for business decisions and can be understood by people who can be trusted regarding company activities and economic activities and are willing to study the information.

When used as a theoretical event, financial reporting must be able to provide information about the economic resources of a company and the conditions that change these sources and in accordance with its expected use, namely financial reports must be appropriate or in accordance with what is needed by potential users. In other words, financial reports must strive to meet the information needs of their users.

After the exchange occurs, at the time the expense occurs, the resulting expense may be linked to income, but for certain expenses, even though they cannot be linked to income, reporting can be done in the period in which the expense occurs to provide a benefit.

###### **2.1.1.3. Income Measurement**

According to Belkoui (2016:23) there are two methods of recognizing income in the accounting period, namely:

1. Important event basis (Cash Basis)

This criterion has led to important events regarding income at a certain point in the income process, namely when assets are sold or services are rendered. This means, by using a pure cash basis, income from the sale of goods or services is only taken into account when the subscription bill is received.

2. Accrual Basis (Accrual Basis)

According to the accrual basis, revenue is recognized if the sale of goods or services has been made at the time it occurs regardless of the period in which it was received. Thus, the accrual basis method takes into account income when sales occur. The accrual basis for revenue recognition states that revenue must be reported during production, so in this case if profits can be calculated proportionally to the tasks performed or services performed at the end of production, then revenue is recognized on the goods or when the sales proceeds are collected.

###### **2.1.1.4. Income Classification**

According to Kusnadi (2017:27) states that income can be classified into two parts, namely:

1. Operating Income

Operating income is income arising from the sale of merchandise, products or services within a certain period within the framework of the main activities or which are the main objectives of the company which are directly related to the main business (operations) of the company concerned. This income is normal in accordance with the company's goals and efforts and occurs repeatedly as long as the company carries out its activities.

## 2. Non-Operating Income

Non-Operating Income is income obtained from side activities or not the company's main activities that are not regular or routine. Separation or distribution of income flowing from sharing sources is very necessary so that accuracy can be obtained in making decisions for external parties, especially users of financial reports.

### **2.1.2. Productivity**

#### **2.1.2.1. Understanding Productivity**

Productivity is a measuring tool for companies to assess the work performance achieved by their employees. Productivity is a concept that describes the relationship between capital, land and energy used to produce these results.

From the definition above, it can be understood that a productive person describes the potential, perception and creativity of someone who always wants to contribute their abilities to benefit themselves and their environment. So a productive person is a person who can make a real and meaningful contribution to the surrounding environment, is imaginative and innovative in approaching life's problems and has intelligence (creative) in achieving his life goals. At the same time such a person is always responsible and responsive in his relations with other people (leadership). Employees like this are organizational assets, who always try to improve themselves within the organization, and will support the achievement of the organization's productivity goals.

#### **2.1.2.2. Factor That Influence Productivity**

The importance of efforts to increase productivity for companies has become fundamental. For this reason, it is very necessary to know and understand what factors can influence it. Because without knowing and understanding these factors it will make it difficult for the company to create a strategic plan which will later be used for improvements in an effort to increase the company's effectiveness and efficiency.

There are several factors that influence employee productivity, namely:

1. Education and training
2. Nutrition and health
3. Motivation
4. Job opportunities
5. Opportunity for achievement
6. Government policy
7. The employee's own skills
8. Technology
9. Work environment and climate
10. Work attitude and ethics
11. Discipline
12. Compensation level

### **2.1.2.3. Ways To Increase Productivity**

There are five ways to increase productivity, namely as follows:

1. **Implement a Cost Reduction Program**  
Cost reduction means that in producing the same quantity of output we use a smaller amount of input. So increasing productivity through cost reduction programs means constant output shared with less input.
2. **Managing Growth**  
Increasing productivity by managing growth means we increase output in greater quality through increased use of input in smaller quantities. This means that output increases more, while input increases less.
3. **Work More Agilely**  
Working more agile will increase productivity. So productivity increases but the amount of input remains the same so that you will get low productivity per unit of output.
4. **Reduce activities**  
By reducing a little output and reducing a lot of unnecessary input, productivity can be increased.
5. **Work More Effectively**  
Increasing productivity through this method is by increasing output, but not reducing the use of input.

### **2.1.3. Operating Costs**

#### **2.1.3.1. Understanding Operating Costs**

The definition of operational costs put forward by Rudianto (2020:19) is "costs related to company operations outside of productivity". Meanwhile, according to Jusuf (2018:15) it is as follows: "Operating costs or operating costs are costs that are not directly related to the company's products but are related to the company's daily operational activities."

Operational costs are grouped into 2 groups and can be interpreted as follows:

1. Direct costs are costs that occur or whose benefits can be identified to certain objects or cost centers.
2. Indirect costs are costs that occur or whose benefits cannot be identified at a particular object or cost center, or costs whose benefits are enjoyed by several objects or cost centers.

#### **2.1.3.2. Operational Costs Control**

Controlling operational costs has a very important meaning for service companies that aim to increase profits, because the efficiency of sales expenses will affect the company's ability to generate profits, and in order for this efficiency to be achieved, control is needed.

According to Welsh, Hilton, Gordon, translated by Purwatiningsih and Maudi Waraouw (2011: 264), the meaning of operational cost control is "Operational cost control is the manager's efforts to achieve goals (in terms of costs) in a certain operating environment".

### **2.2. Previous Search**

Research on the influence of employee productivity and operational costs on increasing income at PT. Intan Nasional Iron Industri Medan is indeed familiar to students both at Dharmawangsa University and outside Dharmawangsa University or in other words at other universities. The author has not received the same title as the title written but it is almost the same, including:

1. Fitri Handayani (2017) Analysis of the Influence of Sales and Operational Costs on Net Income at Pt. Alam Sutera Realty Tbk, Multiple Linear Regression Research Method, research results

from the t test and F test show that the two variables  $t_{count} > t_{table}$  ( $6,413 > 1,699$ ). The t test for the operational cost variable (X2)  $t_{count} = -2.689$  where  $t_{count} > t_{table}$  ( $-2.689 > -1.699$ ). In the F test calculations the results obtained for  $F_{count} = 51.258$  and  $F_{table} = 3.33$ . Thus  $F_{count} > F_{table}$  ( $51.258 > 3.33$ ). The R square result is 0.988 or equal to 98.8%, meaning that the independent variables (sales and operational costs) are able to explain the dependent variable (net income) of 98.8% while the remaining 1.2% is explained by other variables not included in this model. The model is  $LB = 91,171,031,460,335 + 0.429 P + -1,528 BO$ .

2. Advertisement The size of the F table is  $9.236 > 6.94$  with a significance value of 0.032 which is smaller than 0.05 ( $0.032 < 0.05$ ). Thus it can be concluded that simultaneously Production Costs and Operational Costs have a significant effect on Net Profit at PT. Perkebunan Nusantara VIII.
3. Fajar Holis (2017), The Effect of Bmt Surya Barokah Palembang Capital Financing on Increasing the Income and Welfare of Micro Entrepreneurs, Simple Regression Analysis Research Method, The results of this research show that capital financing has a positive and significant effect on increasing the income of micro entrepreneurs and capital financing also has an effect positive and significant on the welfare of micro entrepreneurs. Therefore, to further increase the income and welfare of micro entrepreneurs and further develop BMT Surya Barokah, further increase the capital financing provided and further increase publications so that the public is more aware of the existence of BMT Surya Barokah.

### 2.3. Conceptual Framework

To determine the effect of productivity and operational costs on income, either partially or simultaneously, there are three variables that will be analyzed, namely productivity (X1), operational costs (X2) and income (Y).

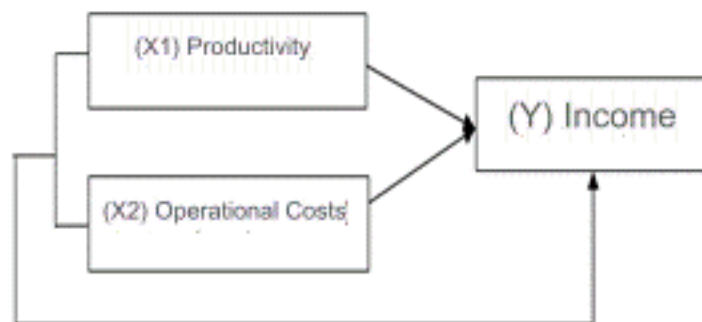


Figure 2.1 Framework of Thought

The meaning of figure 2.1 above is productivity (X1) and operational costs (X2) and have an influence on income (Y), namely if employee productivity increases, income will increase, conversely, if employee productivity decreases, income will decrease. Meanwhile, operational costs mean that if operational costs increase, income will decrease, conversely, if operational costs decrease, income will increase.

### 2.7. Research Hypothesis

Based on the problem formulation, the hypothesis of this research is:

1. Employee productivity has a significant effect on increasing income at PT. Intan National Iron Industry Medan.



- Operational costs have a significant effect on increasing income at PT. Intan National Iron Industry Medan.
- Employee productivity and operational costs have a significant effect on increasing income at PT. Intan National Iron Industry Medan.

## RESEARCH METHOD

### 3.1. Research Sites

This research was conducted at the PT. Intan National Iron Industry Medan is located on Jalan Colonel Ios Sudarso Kilometer Km 10.2, Medan City, North Sumatra. By using company financial report data.

### 3.2. Data Types and Sources

The secondary data source obtained in this research was from the financial report of the company PT. Intan National Iron Industri Medan and from previous research data.

### 3.3. Determination Of Population and sample

Population is all objects in research. The population in this research is the 2015-2021 financial report of the company PT. Intan National Iron Industry Medan.

A sample is a subset of population units. Sampling in this research was carried out using proportional sampling, meaning that the sample was selected based on subjective research considerations where the requirements made as criteria must be met as a sample. The sample used is the financial report of PT. Intan National Iron Industry Medan. The sample criteria in this research are:

- Annual financial report that has been recognized and ratified by the company leadership.
- Reports that are still stored by the company.

### 3.4. Operational Definition of Variables

**Tabel 3.2 Definisi Operasional Variabel**

No	Variabel	Pengertian	Indikator	Skala
1.	Pendapatan (Y)	Total penerimaan seseorang atau suatu rumah tangga selama periode tertentu. Menurut ahli ekonomi klasik, pendapatan ditentukan oleh kemampuan faktor-faktor produksi dalam menghasilkan barang dan jasa pada PT. Intan Nasional Iron Industri Medan. (Samuel, 2019)	<ul style="list-style-type: none"> <li>&gt; Penerimaan</li> <li>&gt; Keuntungan</li> <li>&gt; Harga jual</li> </ul> <p>Sumber : Bramastuti (2009:48)</p>	Rasio
2.	Produktivitas (X1)	Produktivitas, daya produksi, atau keproduktifan merupakan istilah dalam kegiatan produksi sebagai perbandingan antara luaran dengan masukan. Menurut Herjanto, produktivitas merupakan suatu ukuran yang menyatakan bagaimana baiknya sumber daya diatur dan dimanfaatkan untuk mencapai hasil yang optimal pada perusahaan PT. Intan Nasional Iron Industri Medan. (Adreas, 2019)	<ul style="list-style-type: none"> <li>&gt; Kinerja</li> <li>&gt; Efisiensi</li> <li>&gt; Output</li> </ul> <p>Sumber : Niko Ramadhani (2020)</p>	Rasio
3.	Biaya Operasional (X2)	Biaya-biaya yang tidak berhubungan langsung dengan produk perusahaan tetapi berkaitan dengan aktivitas operasional perusahaan sehari-hari pada perusahaan PT. Intan Nasional Iron Industri Medan. (Mulyadi, 2015)	<ul style="list-style-type: none"> <li>&gt; Harga Pokok Penjualan</li> <li>&gt; Biaya Pemasaran</li> <li>&gt; Biaya Administrasi</li> </ul> <p>Sumber : Jopie Yusuf (2006:33)</p>	Rasio

### 3.5. Data Analysis Techniques

This test is carried out to see whether or not the regression model used to predict the dependent variable is appropriate based on the independent variable input, so the regression model must be free from various assumptions, for this reason the following tests need to be carried out:

#### 1) Normality Test

According to Ghozali (2018:161), the normality test aims to test whether in the regression model, the residuals are normally distributed. As is known, the t and F tests assume that the residual values follow a normal distribution. If it is violated, the statistical test is invalid for small sample sizes. The statistical test that can be used to test normality is the Kolmogorov-Smirnov (K-S) test. This research uses a significant value of 5%. To see whether the data is normally distributed or not, you can do it by looking at the significant values. If the significant value is  $> \alpha = 5\%$ , then the data is normally distributed.

#### 2) Multicollinearity Test

According to Ghozali (2018:107), the multicollinearity test aims to test whether the regression model finds a correlation between the independent variables. A good regression model should have no correlation between independent variables. Multicollinearity can be seen from (1) tolerance value and its opposite (2) variance inflation factor (VIF). Tolerance measures the variability of a selected independent variable that is not explained by other independent variables. So, a low tolerance value is the same as a high VIF value (because  $VIF = 1/\text{Tolerance}$ ). The cutoff value that is commonly used to indicate the presence of multicollinearity is a Tolerance value  $\leq 0.10$  or the same as a VIF value  $\geq 10$ .

#### 3) Heteroscedasticity Test

According to Santoso (2014: 187), this test tool is used to find out whether in a regression model, there is inequality of residual variance from one observer to another. If the residual variance from one observation to another is constant, then this is called homoscedasticity. If the variances are different, it is called heteroscedasticity. A good regression model is one where heteroscedasticity does not occur. Detection of the presence or absence of heteroscedasticity can be done using a Scatterplot graph. Detect by seeing whether there is a certain pattern on the graph.

- a. If there is a certain pattern, such as the points that form a certain regular pattern (wavy, widening then narrowing), it means that heteroscedasticity has occurred.
- b. If there is no clear pattern, and the points spread above and below the number 0 on the Y axis, then heteroscedasticity does not occur.

#### 4) Autocorrelation Test

According to Pramesti (2016:69), autocorrelation occurs if there is a residual error correlation between observations. If the correlation is positive then it can be said that there is positive autocorrelation. Conversely, if there is a negative correlation then there will also be a negative autocorrelation. The emergence of autocorrelation will cause the variance of the parameter estimators in the regression model from the Least Squares Method (MKT) to be greater than other estimators.

#### 5) Multiple linear regression test

Multiple linear regression is a measuring tool used to measure whether or not there is a correlation between several variables (Rusiadi, 2015), with the form of the regression equation as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \epsilon$$

Where:

- Y = Income  
A = Price of Y if and test= 0 (constant price)  
B = Regression coefficient



X1	= Productivity
X2	= Operational Costs
$\varepsilon$	= Error Term

6) Partial Regression Coefficient (t Test)

Testing of the partial regression coefficient was carried out using the t test. This test was carried out to determine the partial significance of the role of the independent variable on the dependent variable by assuming that the other independent variables are considered constant. With a significance level of 95%, the calculated t value of each regression coefficient is then compared with the t table value. If  $t\text{-count} > t\text{-table}$  or probability  $< \alpha = 5\%$  means that each independent variable has a positive effect on the dependent variable.

7) Simultaneous Regression Coefficient (F Test)

The F-test is used to test the coefficients together, so that the values of the regression coefficients can be known together. This test is used to find out whether the regression model can be used to influence the dependent variable simultaneously or not. To test the significance of all independent variables, namely inflation, interest rates and exchange rates together with the dependent variable (Composite Stock Price Index) you can use the SPSS program by looking at a table called the ANOVA (Analysis of Variance) Table. To find out whether all independent variables have a simultaneous effect on the dependent variable from the ANOVA table by looking at the sig value. If the sig value.  $>$  than 0.05, the independent variable has no simultaneous effect on the dependent variable. And if the sig value.  $<$  0.05, it can be concluded that the independent variable has a simultaneous effect on the dependent variable.

8) Coefficient of Determination ( $R^2$ )

It is a quantity that provides information on the goodness of fit of the regression equation, namely providing the proportion or percentage of the influence strength of the variables that explain (X1, X2, X3) simultaneously on the variation of the dependent variable (Y). The coefficient of determination ( $R^2$ ) is used to measure how far the model is able to explain variations in the dependent variable. The coefficient of determination is between 0 and 1. A small  $R^2$  value means that the ability of the independent variables to explain variations in the dependent variable is limited. A value close to 1 (one) means that the independent variables provide almost all the information needed to predict variations in the dependent variable.

## RESEARCH RESULT AND DISCUSSIONS

### 4.1. Data Analysis

The data analysis method used in this analysis is multiple liner regression testing, classical assumption testing, coefficient of determination testing and hypothesis testing.

### 4.2. Multiple Linear Regression

In this research, the model and data analysis techniques use a multiple linear regression approach for hypotheses. Before analyzing multiple regression, a classical assumption test is first carried out.

### 4.3. Hypothesis Testing

In this research, the results were obtained using a linear regression test in the SPSS 20 application, the results of this linear regression test will display the results, namely:

#### a) Model Summary or R Value

**Table 4.1. R Value**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	1.000 <sup>a</sup>	1.000	1.000	.04281	1.660

a. Predictors: (Constant), BiayaOperasional, Produktivitas

b. Dependent Variable: Pendapatan

Source: SPSS 20 Processed Data, 2020

Based on the results of the coefficient of determination test in the table above, the adjusted R value in the regression model is 1,000. Apart from that, it can be seen that the R2 value is 1,000. This means the contribution made by productivity and operational costs together to income at PT. Medan's National Iron Industry Diamonds in 2015-2020 were 1,000 or 10.0%, which means that in the results of this research, income was very influential while the remaining 1.1% was influenced by other factors not included in this research.

**b) F test**

The F statistical test basically shows whether all the independent or independent variables included in the model have a joint influence on the dependent or dependent variable, namely as follows:

- a. Ha is accepted or H0 is rejected if  $F_{count} > F_{table}$  at  $\alpha = 5\%$  and the probability value < level of significance is 0.05.
- b. Ha is rejected or H0 is accepted if  $F_{count} > F_{table}$  at  $\alpha = 5\%$  and the probability value > level of significance is 0.05.

**Table 4.2. F Test**

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	423.539	2	211.770	34.852	.000 <sup>b</sup>
Residual	24.305	4	6.076		
Total	447.844	6			

a. Dependent Variable: Pendapatan

b. Predictors: (Constant), BiayaOperasional, Produktivitas

Source: SPSS 20 Processed Data, 2020

To test the statistical hypothesis above, an F test was carried out at the level  $\alpha = 5\%$  (0.05). The F-calculated value for  $n = 7$  is 4.74. From the results of data processing as in the table above, the  $F_{count}$  value is 34,852, while the  $F_{table}$  value is 4.74. That way  $F_{count} > F_{table}$  is  $34,852 > 4.74$  and the significant value is 0.000 (smaller than 0.05). Based on these results, it proves that productivity and operational costs have a joint influence on PT's income. Intan National Iron Industry Medan.

**c) T Test**

The t test basically shows how much influence an explanatory or independent variable individually has in explaining variations in the dependent variable. The criteria used in accepting or rejecting the hypothesis (two-way) are as follows:

- a.  $H_a$  is accepted or  $H_0$  is rejected if  $t_{count} > t_{table}$  at  $\alpha = 2.5\%$  and the probability value  $<$  level of significance is 0.05.
- b.  $H_a$  is rejected or  $H_0$  is accepted if  $t_{count} > t_{table}$  at  $\alpha = 2.5\%$  and the probability value  $>$  level of significance is 0.05

**Table 4.3. T Test**

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	43.348	23.099		13.521	.000		
Produktivitas	.580	.001	.998	7.079	.000	.873	1.145
BiayaOperasional	.088	.045	.005	3.976	.000	.873	1.145

a. Dependent Variable: Pendapatan

Source: SPSS 20 Processed Data, 2020

From the data processing above, it can be seen that the Tcount probability value is as follows:

1. For the value of productivity against income, the processing results show that the Tcount value is 7.079 ( $T_{count} 7.079 > T_{table} 2.015$ ) and the sig.  $0.000 < 0.05$ . So  $H_a$  is accepted and  $H_0$  is rejected. This means that productivity has a positive and significant effect on PT's income. Intan National Iron Industry Medan.
2. For the value of operational costs to income, the processing results show that the Tcount value is 3,976 ( $T_{count} 3,976 > T_{table} 2.015$ ) and the sig.  $0.000 < 0.05$ . So  $H_a$  is accepted and  $H_0$  is rejected. This means that operational costs have a positive and significant effect on PT's income. Intan National Iron Industry Medan.

**Discussion**

Analysis of the findings of this research is an analysis of the suitability of theories, opinions and previous research that have been put forward by the results of previous research as well as behavioral patterns that must be carried out to overcome this. The following are 3 (three) main parts that will be discussed in the analysis of the findings of this research, namely as follows:

**1) Effect of Productivity on Income**

Based on the research results above, the effect of productivity on income was obtained by a T-count of 7.079 ( $T\text{-count } 7.079 > T_{table} 2.015$ ) and a sig.  $0.000 < 0.05$ . So  $H_a$  is accepted and  $H_0$  is rejected. This means that productivity has a positive and significant effect on PT's income. Intan National Iron Industry Medan.

This research is in line with research conducted by Dyas Achin (2019:45) which states that productivity influences the income of the people of Gunung Pati District, Semarang, namely 99.1%. And this is in line with research conducted by Rico Phahlevi (2017: 86), which states that the amount of production and the number of businesses have a significant effect on income because the more businesses and the amount of production greatly influences income, the more businesses, the greater the opportunity to get higher income results. tall.

According to Simanjuntak (2019:56) productivity is a comparison between the results achieved (output) and the total resources (input) used per unit of time. Increased productivity can be realized in 4 forms, namely: 1) The same amount of production can be obtained using fewer resources; 2) Large production quantities can be achieved using less resources; 3) A larger amount of production can be achieved using the same resources, 4) A much larger amount of production can be achieved with the addition of relatively fewer or fewer resources.

According to William Eachern (2018:60), Productivity is the ratio between a certain output size compared to a certain input or resource size. From the opinion above, it can be concluded that productivity is the ability of a company to produce output (amount of production) using existing production factors. These production factors include land area, capital, labor and expertise.

## 2) Effect of Operational Costs on Income

Based on the research results above, for the influence of operational costs on income, the T-count value is 3,976 (T-count 3,976 > T-table 2.015) and the sig. 0.000 < 0.05. So  $H_a$  is accepted and  $H_0$  is rejected. meaning that operational costs have a positive and significant effect on PT's income. Intan National Iron Industry Medan.

The company will show the size of the company's income if it can reduce its operational costs. According to Kuswadi (2017:34) in calculating income and loss, the amount of these costs will reduce income or increase the company's losses. So, the greater the value of the operational costs, the smaller the income obtained and vice versa, if the operational costs can be minimized, the income generated will be maximized too.

The research conducted by the author as above is almost the same as Fransisca Ernawati's (2015:67) research which states that operational costs have a significant negative effect on income. This research contradicts the results of previous research conducted by Meiza Efilia (2019:80) which stated that there was no significant influence from operational expenses on net income.

The amount of operational costs which is the basis for determining net income shows the company's ability to generate profits from managing its assets, where operational costs are a result of the company's operational turnover performance in obtaining maximum income, where if the value of operational costs is high, this shows that the prediction Net income is also high, which means the company's ability to manage company finances is quite optimal. The increase in operational costs was caused by several components of operational costs, namely employee costs, fuel costs and rental costs. Thus, if costs are wasted, it will result in a decrease in net income

It can be seen that there is an increase in operational costs and this is accompanied by an increase in operational income, and conversely, a decrease in operational costs is accompanied by operational income. This was emphasized by Slamet Riyadi (2021:82) "So the amount of operational costs/operational income can affect a company's income, the greater the operational costs/operational income, the more inefficient a company's operations will be and affect the company's ability to earn income." This means that an increase in operational costs/operational income as one of the ratios can have an impact due to an increase in the company's operational performance resulting from an increase in operational costs and conversely a decrease in operational income can occur due to an increase in the company's operational performance resulting from an increase in operational costs.

## 3) Effect of Productivity and Operational Costs on Income

Based on the F test results above, a significant value of 34,852 was obtained, while the F table value was 4.74. In this way,  $F_{count} > F_{table}$  is 34,852 > 4.73 and the significant value is 0.000 < 0.05. Based on these results, it proves that productivity and operational costs have a significant influence on PT's income. Intan National Iron Industry Medan.

According to Angkoso (2016: 87) factors that influence income are company size, company age, leverage level, sales level, changes in past income. This is in line with research conducted by Meiza Efilia (2019:90) which states that productivity and operational costs have a significant effect on income. Likewise, research conducted by Regiana Eka Anjani (2015:60) stated that productivity and operational costs have a positive and significant effect on company income.

One of the elements that influences revenue is the costs incurred by the company during the production process, both productivity and operational costs. According to Mulyadi (2015:69), the factors that influence the income obtained by a company are costs, where the costs arising from acquiring or processing a product will affect the selling price of the product in question.

Income is the basis for tax calculations, a guideline for determining investment policies and decision making, the basis for forecasting income and other company economic events in the future, the basis for calculating and assessing efficiency in running a company.

If productivity and operational costs both increase, net income will increase, and vice versa, if productivity and operational costs both decrease, net income will decrease.

## **CONCLUSION**

Based on the results of the research and discussion previously stated, we can conclude from the research regarding the influence of employee productivity and operational costs on increasing income at PT. Intan National Iron Industry Medan.

1. Based on the research results on the influence of productivity on income, a tcount value of 7,079 was obtained ( $T_{count} 7,079 > T_{table} 2.015$ ) and a sig value.  $0.000 < 0.05$ . So  $H_a$  is accepted and  $H_0$  is rejected. This means that productivity has a positive and significant effect on PT's income. Intan National Iron Industry Medan.
2. Based on the research results of the influence of operational costs on income, a t-count value of 3,976 was obtained ( $T\text{-count } 3,976 > T\text{-table } 2.015$ ) and a sig value.  $0.000 < 0.05$ . So  $H_a$  is accepted and  $H_0$  is rejected. This means that operational costs have a positive and significant effect on PT's income. Intan National Iron Industry Medan.
3. Based on the results of research on productivity and operational costs, the calculated F value is  $34,852 > 4.74$  and is significant  $0.000 < 0.05$ . Based on these results, it proves that productivity and operational costs have a positive and significant influence on PT's income. Intan National Iron Industry Medan

## **Suggestion**

Based on the conclusions above, the author can suggest the following things:

1. For companies, it is best to incur as few operational costs as possible in order to get maximum income. Companies are also expected to pay attention to the value of the costs incurred so that they can increase the value of their income significantly.
2. Future researchers are expected to be able to add other research variables which are expected to have a greater influence on income. Because there are many other internal and external factors that can influence income.
3. For the further development of management science, based on the results of the research above, productivity and operational costs have an effect on income. It is recommended to increase the number of years to be studied in order to strengthen the research results



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