



## Analysis of the Influence of Work Ethic and Work Motivation on Employee Work Productivity of Pt. Bayer Indonesia

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### ABSTRACT

Work ethic is something that needs to be considered to increase the productivity of PT. Bayer Indonesia employee performance. In addition to work ethic, good motivation is also needed. The purpose of this research is to find out how much influence work ethic and motivation have, either separately (partially) or together (simultaneously) against employee performance productivity of PT. Bayer Indonesia. The research variable questionnaire was created based on the dimensions and indicators of the research variables distributed to 92 samples from 1200 employees.

From the results of the questionnaire answers, scores will be obtained for each independent variable (Ethos and Motivation) and related variables (Productivity) of employees at PT. Bayer Indonesia. The percentage of the influence of work ethic on employee work productivity at PT. Bayer Indonesia is 75%, while motivation has an effect on work productivity at PT. Bayer Indonesia by 38%. While together the influence of work ethic and work motivation on work productivity at PT. Bayer Indonesia is 95%.

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## INTRODUCTION

Labor is the most important factor of production for a company without it, it is difficult for the company to achieve their goals. They are the ones who determine whether a company will progress or decline. Because the company has a skilled and motivated workforce, the company has a very expensive asset that is difficult to value in monetary terms. Work ethic is very important to achieve maximum success in a person's work, in the sense that the higher the work ethic of a worker, the higher the productivity of the worker's work. Work ethic refers to the mentality and inner attitude of a person or group of people when there is moral pressure. In the context of employees being part of an organization, work ethic means mobilizing the full potential of employees as part of the organization to achieve goals (Benjamin Bukit, 2017)

Motivation is a very important subject for organizations because motivation determines the achievement of work results achieved. This is understandable because motivation is a driving factor that causes human behavior, so that motivation can provide stimulation to take action to achieve the desired goals. With high work motivation, it can increase employee job satisfaction and even increase employee productivity, so it will have a significant influence on the achievement of overall results by the organization (Michael Armstrong, 2006).

PT Bayer Indonesia. PT Bayer Indonesia is a PMA (Foreign Investment) engaged in the chemical manufacturing sector which produces among others mosquito repellent Baigon, Bayfress, Bayclean, and medicines such as; Aspirin, Saridon, CDR, Beroca, Redoxon, Canesten and others. Through the results of a pre-survey with several employees and one of the heads of the production unit, there are indications that the company is currently experiencing a decline in production. This happens because employees work as they please without high work enthusiasm. The work ethic that employees should have is starting to weaken, this incident does not just arise from within the employee, but the decline in the employee's work ethic is due to the socio-political and internal environmental conditions of the company, economic structure, and motivation.

## LITERATURE REVIEW

### Theoretical basis

Glenn Bosenen (2009), said that work ethic is the soul and spirit of work that is influenced by how someone sees their work. This perspective is closely related to the principles that someone grows and develops and adheres to .

Motivational research conducted by William James of Harvard University (2001) in George R. Terry (2007) shows that companies can maintain jobs at levels approaching 80% to 90% of their capabilities if they receive high motivation. Therefore, motivation is a major determining factor in influencing employee satisfaction and performance levels .

McGregor's theories, described in George R. Terry (2007), are known as "Theory X" and "Theory Y", are two opposing perspectives on human nature known as "Theory X" and "Theory Y". According to Douglas' traditional design, there are two different management approaches or philosophies that can be applied in business. Each method is based on a set of theories – known as Theory X and Theory Y – about human nature.

### **Previous Research**

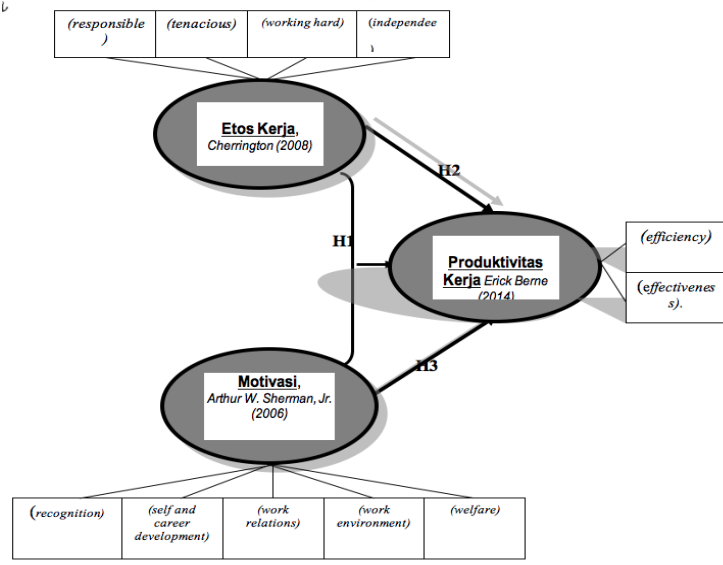
1. Jeane Maramis, (2023). The influence of motivation and work ethic on employee productivity at Bank PT. Sulutgo Manado. Her study found, using 65 people surveyed and using multivariate and partialistic regression models, that two variables – work motivation and work ethic – had a positive and significant effect on employee work productivity. They were able to contribute 57.2%, indicating that both variables should be considered when increasing work productivity.
2. Lara Sukriandara, (2019). The Influence of Islamic Work Ethics and Work Motivation on Employee Work Productivity at the Regional Office of the Ministry of Religion of East Kalimantan Province. The results of the study, which were conducted using multiple linear regression analysis tools on 33 employees surveyed. According to the results of the study, work ethics have a positive and significant effect on work productivity
3. Abdul Rachman Saleh, Hardi Utomo, (2018). The influence of work discipline, work motivation, work ethic and work environment on the work productivity of production employees at PT. Inko Java Semarang. The results of the study showed that the four independent variables made a positive or capable contribution (63.6%), but work discipline, work environment, and work ethic showed a positive and significant influence on employee productivity.

### **Research Hypothesis**

Considering the research diagnosis above, the research hypothesis can be constructed and sequenced as follows:

- H1 = Simultaneously, work ethic and work motivation have a positive and significant effect on the work productivity of PT. Bayer Indonesia employees.
- H2 = Partially, work ethic has a positive and significant effect on the work productivity of PT. Bayer Indonesia employees.
- H3 = Partially, motivation has a positive and significant effect on the work productivity of PT. Bayer Indonesia employees.

**Framework of Thinking**



Research Framework Scheme

**METHODOLOGY**

**Research Design**

The study uses an Explanatory analysis approach. This means that each variable presented in the hypothesis will be observed through testing the causal relationship between the Independent variable and the Dependent variable. In this case, it examines the relationship between two or more variables, where in this study it examines the relationship and influence between work ethic and motivation factors on work productivity at PT. Bayer Indonesia. This phenomenon can be designed through the following mathematical function:

$$\hat{Y} = F (X1, X2... ..... +Xn) \text{ multivariate equation model, with}$$

$$\hat{Y} = F(X), \text{ bivariate equation model.}$$

**Research Location**

The factory in Cimanggis is the only factory in ASEAN and Asia Pacific out of 12 factories owned by Bayer which is the center of Bayer's production in the world, Jl. Raya Bogor KM 32, Cimanggis Depok 16416

**Population and Research Sample**

Next, determining the number of representative research samples is based on the guidelines provided by Michael G. Zikmund (2013 ).

$$n = \frac{N}{1 + Ne^2}$$

$$n = \frac{1200}{1 + (1200 \times 0,01)}$$

= 92.30 (rounded to 92) workers, who in this opportunity are explained as research respondents.

## RESEARCH RESULT

### 1. *Validity Test*

#### a. Validity Test of Work Ethic Instrument

Questionnaire	R count	R critical	Determined
Instrument No.1	0.6388888889	0,208333333	Valid
Instrument No.2	0.65625	0,208333333	Valid
Instrument No.3	0.611805556	0,208333333	Valid
Instrument No.4	0.639583333	0,208333333	Valid
Instrument No.5	0.538888889	0,208333333	Valid
Instrument No.6	0.654861111	0,208333333	Valid
Instrument No.7	0.679166667	0,208333333	Valid
Instrument No.8	0.59375	0,208333333	Valid
Instrument No.9	0.663194444	0,208333333	Valid
Instrument No.10	0.531944444	0,208333333	Valid
Instrument No.11	0.68125	0,208333333	Valid
Instrument No.12	0.604861111	0,208333333	Valid
Instrument No.13	0.675	0,208333333	Valid
Instrument No.14	0.486805556	0.208333333	Valid

*Source: Primary Data, processed in 2023*

#### b. Test of Validity of Motivation Instruments

Questionnaire	R count	R critical	Conclusion
Instrument No.1	0.60625	0.2083333	Valid
Instrument No.2	0.6611111	0.2083333	Valid
Instrument No.3	0.5895833	0.2083333	Valid
Instrument No.4	0.6472222	0.2083333	Valid
Instrument No.5	0,5145833	0,2083333	Valid
Instrumen No.6	0,6256944	0,2083333	Valid
Instrumen No.7	0,5777778	0,2083333	Valid
Instrumen No.8	0,6388889	0,2083333	Valid
Instrumen No.9	0,5173611	0,2083333	Valid
Instrumen No.10	0,6305556	0,2083333	Valid
Instrumen No.11	0,65625	0,2083333	Valid
Instrumen No.12	0.5756944	0.2083333	Valid
Instrument No.13	0.6659722	0.2083333	Valid
Instrument No.14	0.5277778	0.2083333	Valid

*Source: Primary Data, processed in 2023*

**c. Validity Test of Work Productivity Instruments**

Questionnaire	R count	R critical	Conclusion
Instrument No.1	0.5048611	0.2083333	Valid
Instrument No.2	0.6638889	0.2083333	Valid
Instrument No.3	0,5854167	0,2083333	Valid
Instrumen No.4	0,6430556	0,2083333	Valid
Instrumen No.5	0,5291667	0,2083333	Valid
Instrumen No.6	0,6638889	0,2083333	Valid
Instrumen No.7	0,5986111	0,2083333	Valid
Instrumen No.8	0,6493056	0,2083333	Valid
Instrumen No.9	0,6493056	0,2083333	Valid
Instrumen No.10	0.5673611	0.2083333	Valid
Instrument No.11	0.6916667	0.2083333	Valid

**2. Reliability Test**

Reliability Test Results

Variables	Alpha Coefficient ( $\alpha$ )	Information
Work ethic	0.5430556	Reliable
Motivation	0.5423611	Reliable
Work Productivity	0.5465278	Reliable

**3. Multicollinearity**

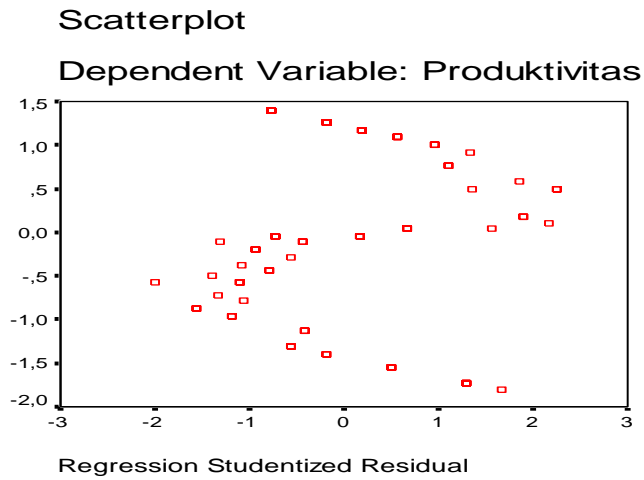
a. t-test

The results of data processing using the SPSS pc 25.0 program show that  $T_a = 8.649$  for the significance of  $T_a = 0.000$ ,  $T_{x1} = 8.939$  for the significance of  $T_{x1} = 0.000$ , and  $T_{x2} = 4.191$  for the significance of  $T_{x2} = 0.002$ . The previous t-test shows that the model does not experience multicollinearity constraints because the dominant t count is relatively greater than its significant t.

b. Correlation test on independent variables

The correlation coefficient (Rho) of X1 and X2 which is relatively low or below 40% can also be used to test the assumption of multicollinearity. Note the correlation value between the work ethic variable and motivation or vice versa, which is  $27\% \leq 40\%$ . This value indicates that there is no multicollinearity constraint because both variables provide a relatively low correlation, which is below 40%.

### Heteroscedasticity



Based on the scatterplot graph between SRESID and ZPRED above, it can be concluded that there is no heteroscedasticity in the regression model .

#### 4. Normality

No	Normality	Condition	Value Generated
1	$X_1, X_2 \rightarrow Y$	Normality Col. Smirnov Test $> \alpha$ (A Symp Sig. T $> \alpha$ )	Fulfilled with value $0.234 > 0.050$
2	$X_1 \rightarrow Y$	Normality Col. Smirnov Test $> \alpha$ (A Symp Sig. T $> \alpha$ )	Fulfilled with value $0.147 > 0.050$
3	$X_2 \rightarrow Y$	Normality Col. Smirnov Test $> \alpha$ (A Symp Sig. T $> \alpha$ )	Fulfilled with value $0.127 > 0.050$

#### 5. Linearity

No	Normality	Condition	Results	Decision
1	$X_1, X_2 \rightarrow Y$	$Sig. F < \alpha$	The significance of F (0.000) is smaller than Alpha (0.05).	Linear
2	$X_1 \rightarrow Y$	$Sig. F < \alpha$	The significance of F (0.000) is smaller than Alpha (0.05).	Linear
3	$X_2 \rightarrow Y$	$Sig. F < \alpha$	The significance of F (0.000) is smaller than Alpha (0.05).	Linear

## 6. Hypothesis Testing

The results of data processing with SPSS pc 25.0 software show that the variables of work ethic and motivation simultaneously or multivariately are able to provide a relatively strong, positive and significant contribution to employee work productivity. The results of the calculation of the multiple regression coefficient (simultaneous) show that the regression model equation is  $\hat{Y} = 9.193 + 0.425 (X1) + 0.322 (X2) + e$ .

the relationship between the independent variable and the dependent variable with the assumption that the other variables are constant, namely:

1. The regression coefficient of variable X1 shows a positive relationship between the work ethic variable and employee work productivity, with an increase of 0.425 and a sig prob of 0.000 (significant for  $\alpha < 0.01$ ).
2. There is a positive relationship between the motivation variables and employee work productivity, with an increase of 0.322 and a sig prob of 0.002 or significant for  $\alpha < 0.01$ , according to the regression coefficient of variable X2 is positive.

## CONCLUSIONS

Through the results of the analysis and discussion, it shows that work ethic and motivation (as predictor variables) can increase employee productivity at PT. Bayer Indonesia. However, specifically the results of this study are sorted as follows:

1. Simultaneously, work ethic and motivation factors have a positive and significant effect on employee work productivity at PT. Bayer Indonesia with a very strong contribution, which is 95%, while the rest (15%), are factors identified outside the model, namely (competency variables). Are variables identified, when the pre-survey was conducted, but were not raised in this research opportunity.
2. Partially, the work ethic factor has a positive and significant influence on the work productivity of PT. Bayer Indonesia employees and its contribution is quite strong (75%) will create work efficiency and effectiveness.
3. Partially, motivation has a positive and significant influence on employee work productivity at PT. Bayer Indonesia, the contribution is relatively weak (38%). In creating work efficiency and effectiveness. The contribution is relatively weak, but still within a significant tolerance for increasing employee work productivity.

## RECOMMENDATIONS

After reaching a conclusion on the first point, the researcher attempted provide suggestions that can be used as recommendations, especially for PT. Bayer Indonesia as the object of research, as well as other companies

the kind that requires.

1. Paying attention to work ethic and motivation can provide positive and significant predictions of employee work productivity, and even provide a very strong contribution. It is suggested that the two variables above can be used as strategic policy indicators in an effort to create employee work productivity, which is ready to face global competition in an era of disruption that is not identified externally.
2. Upholding unfailing discipline, Realizing a professional employee attitude, Stimulating Initiative and productive thinking . Then, Appreciating colleagues both diagonally and vertically .
3. Employee work motivation must be built and sustainable. This can be done by paying attention to "Direct motivation and Indirect motivation", namely by providing bonuses for achievements produced or through the "gains sharing" policy, providing facilities, praise and in the framework of a refreshing program or upgrading capabilities.

## **REFERENCES**

Every supporting study is here **and follows the APA 7th referencing guide** . We strongly advise you to use referencing tools like **Mendeley** . Write your references as follows:

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