The Effect of Work Dicipline And Occupational Safety and Health on employee productivity at PT. Citacontrac Jakarta

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A B S T R A C T

In the globalization era, companies must excel to compete effectively, and human resources play a critical role in organizational success. Human Resource Management (HRM) organizes individuals to drive positive change. This study examines the influence of work discipline and occupational safety and health (OSH) on employee productivity at PT Citacontrac Jakarta. It focuses on three variables: Work Discipline, OSH, and Work Productivity. Using Non-Probability Sampling and Saturated Sampling methods, all 60 employees of PT Citacontrac were included, making it a population study. The analysis employed t-tests to test three hypotheses. The results indicate that Work Discipline significantly and positively impacts Work Productivity (t-value = 2.908 > t-table = 1.295, $p < 0.05$), leading to the acceptance of H1. Similarly, OSH positively influences Work Productivity ($p < 0.05$), confirming H2. Finally, the combined effect of Work Discipline and OSH on Work Productivity was significant (t-value = 11.040 > t-table = 1.295, $p < 0.05$), supporting H3. These findings highlight the importance of enforcing work discipline and ensuring OSH to enhance productivity, emphasizing their collective and individual contributions to organizational success.

1. Introduction

A. Background

In the current era of globalization, all aspects of life are required to compete to show the best, because the best will be chosen to be able to compete in the market. A company should prepare itself to face existing challenges, and in fact humans play a big role in an organization or company. To make changes in a positive direction, reliable humans are needed in the interests. Humans who must be arranged in a management are Human Resource Management (HRM).

The aspect of human resources in a company plays an important role, namely as one of the benchmarks for the level of employee work productivity, with the understanding that if the level of quality of human resources in a company is high or good, then the level of employee work productivity in the institution is easier to increase, and vice versa if the level of quality of human resources is low or lacking, then the level of employee work productivity will be difficult to increase. Therefore, the company must pay more attention to its employees so that productivity can increase.

As is known in an organization there is one element, namely humans, which is the driving force of an organization's goals that fights the most to determine the success or failure of a goal in the company. Human resources or commonly called employees are at war in planning, implementing, supervising, and controlling the organization so that the company achieves its mission well. Based on the description above, it can be concluded that employee productivity greatly affects the results of achievements in the company.

Productivity is one of the components that must be owned by an institution or company if it wants to achieve its stated goals. In its activities, the company must be able to increase productivity from time to time, because this concerns the performance of the institution. According to Hasibuan in Busro (2018; 340), Productivity is a comparison between output and input, thus productivity is interpreted as how efficient the concrete results or products produced are with the power deployed. Productivity will increase the efficiency of time, materials, energy, work systems, production techniques, to improving the skills of its workforce.

Sutrisno (2019; 103), there are several factors that affect work productivity, including work discipline. Work discipline is one factor to increase productivity with discipline in all areas, including discipline in time and the use of standard operating procedures.

PT. CITACONTRAC is one of the companies engaged in the provision of outsourcing services, this company is one of the outsourcing service providers that collaborates with PT. PLN (Persero), established since the 1980s, making PT. CITACONTRAC one of the largest service providers after the subsidiary of PT. PLN (Persero) itself.

Table 1.1

Year	Realization	Target	Percentage
2021	**14.655.085**	**23.881.990**	**61.3 %**
2022	**9.486.493**	**19.105.593**	**49.6 %**

Source: Data obtained from PT. PLPN (Persero) UP3 Ciputat. Period 2021-2022

From the results of table 1.1 above, it shows that there is a suboptimality in the results of the realization which is very far from the target, especially from the last two years, namely 2021 where the realization of work was only 14,655,085 from the target set, namely 23,881,990, this achievement is only 61.3% of performance based on the target, and there was a drastic decline in 2022 which only managed to get 9,486,493 from the target that had been set, namely 19,105,593 or around 49.6% of the target that had been set, this is suspected to be caused by indiscipline in carrying out the work that should have been carried out by the executor of PT. CITACONTRAC for the PT.PLN (Persero) UP3 Ciputat area.

Therefore, increasing discipline becomes an important part of human resource management, as an important factor in increasing productivity. Work discipline is a tool used by managers to communicate with employees so that they are willing to change a behavior and as an effort to increase awareness and willingness of a person to obey company regulations and applicable social norms.

Work discipline according to Latainer in Sutrisno (2019; 87), is a force that develops

within the employee's body and causes employees to be able to voluntarily adjust to decisions, regulations, and high values of behavior. This opinion is also supported by Hasibuan (2019; 193), who also stated that discipline is a person's awareness and willingness to obey all company regulations and applicable social norms.

In addition to discipline that affects work productivity, there is another variable that affects it, namely Occupational Health and Safety (K3). K3 plays a very large role for companies. Occupational Safety and Health (K3) is a field that is related to the health, safety, and welfare of people working in an institution or at a project site. The purpose of implementing Occupational Safety and Health is to maintain the health and safety of the work environment, as well as to protect coworkers, workers' families, consumers and others who may also be affected by safe conditions at all times. Occupational Safety and Health (K3) practices include prevention, sanctions, and compensation, as well as wound healing and care for workers, as well as providing health care, and sick leave.

According to Suparyadi in Zainal (2015;268), Occupational health is a physical, mental and social condition and not just the absence of disease or weakness when carrying out a job. Occupational health is a daily life resource for employees, including when they carry out their work, because without health, employees cannot carry out their work properly.

In addition to the variables of work discipline and K3 that affect employee work productivity, there are factors that affect work productivity but are not used in the study, namely leadership style and work environment. Leadership style According to Rivai (2014), leadership style is a set of characteristics used by leaders to influence subordinates so that organizational goals are achieved or it can also be said that leadership style is a pattern of behavior and strategies that are preferred and often applied by a leader. Meanwhile, the Work Environment according to Nitisemito (756; 109), the Work Environment is everything that is around workers and can influence them in carrying out the tasks assigned

B. Problem Statement

Based on the background of the problem above, the formulation of the research problem is as follows:

1. Does work discipline affect the productivity of performance of P2TL implementers at PT. CITACONTRAC Jakarta?
2. Does K3 affect the productivity of performance of P2TL implementers at PT. CITACONTRAC Jakarta?
3. Do work discipline and K3 have a joint effect on the productivity of performance of P2TL implementers at PT CITACONTRAC Jakarta?

C. Objectives and Scope

The purpose of this study is to determine and analyze:

1. The influence of work discipline on the productivity of the performance of P2TL implementers at PT. CITACONTRAC
2. The influence of K3 on the productivity of the performance of P2TL implementers at PT. CITACONTRAC
3. The influence of work discipline and K3 together on implementers at PT. CITACONTRAC

2. Literature and Review

1) Related Work

A. Produktifitas Kerja (Work Productivity)

Work productivity is the ability of employees to produce compared to the input used, an employee can be said to be productive if he is able to produce goods or services as expected in a short and precise time. Work productivity is the ability of a set of economic resources to produce something as a comparison between sacrifice (input) and production (output) (Muchdarsyah Sinungan, 2014; 12). In a simple sense, the work productivity above can be expressed in the sense that productivity is the ratio of expenditure and income used. Productivity is the result obtained from each production process using one or more productivity factors.

Benrazavi and Silong (2013;14) stated that teamwork is an important factor that contributes to employee productivity. Teamwork is a joint activity aimed at achieving common goals by involving members of the organization in certain groups to share their knowledge and skills with each other (Seppala, 2015).Factors Affecting work productivity In the analysis of human resource management, employee productivity is a dependent variable or is influenced by many factors (Sedarmayanti, 2001;57). That productivity is greatly influenced by the following factors:

1) Work attitude
2) Skill level
3) Relationship between workers and organizational leaders
4) Productivity management
5) Workforce efficiency
6) Entrepreneurship

while the factors causing declining productivity according to researchers and observers of productivity issues have found several factors that have caused declining productivity in several countries, both at the organizational level and at the national level. These factors include:

1. Waste of resources in the production and consumption process.
2. Increases in salaries and wages that are not accompanied by an increase in employee performance.
3. High-cost economy as a result of major expansion, long procedures and administration, corruption, and inefficient work methods.
4. Low employee motivation at various levels of the organization.
5. Reduced research and development activities that can be expected to produce new discoveries.
6. Decrease in capital investment that should be able to help expand production capacity, as a result of world economic conditions.

Disipline Kerja (Work Discipline)

Work discipline is one of the most important functions of human resource management, because good discipline reflects a person's great sense of responsibility for the tasks given. Good discipline reflects a person's great sense of responsibility for the tasks given to him. This encourages work passion, work spirit, the realization of a goal for the company and employees. Safitri Irianti's opinion (2015:3) says that "discipline is training and educating an orderly life". This proves that discipline does not contain the meaning of limiting,

restraining or punishment as many people think. The role of environmental employees, both in their positions as subordinates and leaders, is very important in determining the success of their work units. Discipline is a complex human behavior, because it involves elements of disposition and social environment Sofan Amri (2016:166). Viewed from a psychological perspective, humans have two tendencies, namely tending to behave well and tending to behave badly, tending to obey and disobey, tending to obey or rebel. These tendencies can change at any time depending on how they are optimized. Humans have these two basic potentials, so that humans have a positive attitude and behave in a disciplined manner according to the rules, optimization of human spiritual powers through various forms of instilling discipline and obedience needs to be attempted. These efforts are carried out through habituation, changes in patterns and systems of rules that regulate behavior, policies, sanction systems, and rewards for perpetrators and supervision.

According to Singodimedjo and Sutrisno (2019;94), Work discipline is a state of awareness and willingness of employees to obey any established regulations and applicable social norms. Overall, the dimensions and indicators of discipline include:

1) Level of punctuality

This includes the hours of arrival and departure from work, to what extent employees are punctual in completing a task assigned. Indicators in this case include:

a) Discipline during working hours including the hours of arrival and departure from work

b) Level of work completion

2) Level of compliance with regulations.

How far employees can follow the regulations given and not violate them. Indicators in this case include:

a) Compliance with applicable regulations (SOP)

3) Compliance with rules of conduct

Employees can obey in behaving according to the culture applied in the company, and be responsible for the tasks and responsibilities given. Indicators in this case include:

a) Compliance with rules of conduct at work

b) Responsible for the tasks and responsibilities given

B. Keselamatan dan Kesehatan Kerja/K3 (Occupational Health and Safety)

K3 is important to be implemented and carried out by the business world, especially construction projects, to protect employees or workers from the dangers of work accidents and diseases that occur during work. Implementation of K3 that is not considered in employee or worker performance will disrupt employee or worker work productivity, but if K3 has been implemented and carried out properly, optimal performance results will grow because employees feel that their safety and health are being taken care of. K3 is a protection effort aimed at ensuring that workers and other people in the workplace/company are always safe and healthy, and that every source of production can be used safely and efficiently (Minister of Manpower Decree Number 463/MEN/1993). Another definition according to OHSAS 18001:2007, occupational safety and health are conditions and factors that affect K3 and other people in the workplace.

Based on Manpower Law No. 13 of 2003 article 87, every Company is required to implement an integrated occupational safety and health management system with the Company's management system. According to Mathis and Jackson (2007), the definition of K3 is an activity to ensure the realization of safe working conditions for employees, prevent them from physical and mental disorders, direct and control the implementation of tasks, and provide assistance, both from

government institutions and Companies.

According to Notoatmodjo (2009;153) the main objective of K3 is for employees or staff in an institution to get optimal health so as to achieve the highest Work Productivity. Meanwhile, according to Mangkunegara (2014), in addition to aiming to avoid accidents in the company's production process, K3 also aims to increase employee enthusiasm, work harmony, and 10 work participation and it can be ensured that employee performance increases.

Dimensions and indicators according to Suparyadi in Zainal (2015;268) Occupational Health and Safety is a physical, mental and social condition and not just the absence of disease or weakness when carrying out a job, Occupational Health is a daily life resource for employees, in this case the dimensions and indicators for Occupational Health and Safety are as follows:

1) Availability of sufficient Personal Protective Equipment. Indicators in this case include:
   a) Availability of sufficient PPE
   b) Warning to always use PPE
2) Availability of a safe workspace. Indicators in this case include:
   a) Availability of storage space
   b) Minimize the risk of work accidents in the workspace
3) Use of work equipment. Indicators in this case include:
   a) Availability of PPE according to K3 standards
   b) Awareness of implementers in using PPE
4) Healthy workspace. Indicators in this case include:
   a) Sufficient indoor air circulation
   b) Maintained room cleanliness
   c) Workspace separated from storage space

2) Research Gap

Based on the results of the research that has been conducted, it implies that most of them state that the variables of work discipline and K3 can affect other variables, namely employee productivity. Previous research related to Work Discipline, Occupational Health and Safety (K3), and Performance Productivity are as follows:

a. Fahmi Kemal (2018), Financial & Non-Financial Compensation: Its Impact on Employee Work Productivity of PT. Samafitro, Central Jakarta, from Journal of Management and Banking vol. 5 no.2. from this research has result that Non-Financial compensation has a positive and significant partial effect on employee productivity at PT. Camafitro. This research also has equality which impacts employee productivity at some companies.
b. Muhammad Sudwiyatmoko, The Influence of Work Discipline, occupational safety and health and the Work Environment on the productivity of Employees in the Production division of PT. Barlow Tyrie Indonesia, from Indonesia Ejournal Universitas Diponegoro. From this research it has results is work discipline and occupational safety and health have a significant influence on the work productivity of PT Barlow Tyrie Indonesia employees, this research also has equality which is work discipline, occupational safety and health, and employee productivity.
c. Nining Wahyuni, bambang suyadi, wiwin hartanto (2021): The influence of occupational safety and health on work productivity at PT. Kutai Timber Indonesia, from Journal of economic education: Scientific journal of education, economics, and social sciences, ISSN 1907-9990 E-ISSN 2548-7175 Vol.2 Number 1. The results of this study indicate that occupational safety and health have a significant effect on employee work productivity at PT. Kutai Timber

Indonesia

3. Research Methods

1) Data Collection

A. Source of Data

The source of research data is the source of data subjects that can be collected. In conducting this research, data collection techniques are an important part because they affect the success of a study. Based on the data source, it is divided into two parts, namely primary data and secondary data, namely:

a. Primary Data

The definition of primary data according to Sugiyono (2015) is a data source that directly provides data to data collectors.

b. Secondary Data

Secondary data is data that refers to information collected from existing sources. Secondary data sources are company records or documentation, government publications, industry analysis by the media, websites, the internet, and so on (Uma Sekaran, 2011).

Based on the explanation above, it can be concluded that data collection is a technique or method used by researchers to obtain the data needed to answer the problems to be studied.

This study uses primary and secondary data. Primary data is obtained by giving questionnaires directly to employees working at PT. CITACONTRAC While secondary data is obtained by analyzing data provided by PT. CITACONTRAC and reading books and websites from the company.

B. Sampling Methods

According to Sugiyono (2015; 193) data collection techniques can be done by interview, questionnaire, observation, and a combination of the three. The explanation of each data collection technique is as follows:

1. Questionnaire

   According to Sugiyono (2015; 199) a questionnaire is a data collection technique that is done by giving a set of written questions or statements to respondents to be answered.

2. Interview

   According to Esterberg in Sugiyono (2015; 72) an interview is a meeting held by two people to exchange information or ideas by means of questions and answers, so that it can be narrowed down into a conclusion or meaning in a particular topic.

3. Observation

   According to Sugiyono (2015; 204) observation is an activity of loading research on an object. When viewed in the process of implementing data collection, observation is divided into participants and non-participants

   .

In this study, the researcher used a questionnaire and observation. The questionnaire uses a method of providing a set of questions or written statements to respondents to get their answers. The questions in this questionnaire are closed and structured, which means

that the answers that will be chosen by the respondents are not given the opportunity to choose or provide answers outside the answers given by the researcher, while the observations are carried out to find out how the characteristics and habits of the respondents are related to the research variables in order to further strengthen the results of this study.

2) Analysis Techniques

A. Analytical Methods

The data analysis technique in this study uses the assistance of the Statistical Package for Social Science (SPSS) for Windows Release 22.0 computer program. The method used is associative hypothesis testing, namely knowing the relationship between two or more variables. Where the X variable (independent variable) is Work Discipline (X1) and K3 (X2), while the Y variable (dependent variable) is Performance Productivity. The data analysis method is as follows:

1. Scale Measurement Technique

In this study, the measurement technique uses the Likert Scale, namely a scale used to measure the nature, opinions, and perceptions of a person or group of people about a social phenomenon quoted from Sugiyono (2013; 58). Where the variables are then arranged into instrument items in the form of statements.

With the Likert Scale, the variables to be measured will be described as variable indicators. Then the indicators are used as a benchmark for compiling instrument items that can be in the form of statements or questions that will be given to sources related to the research being conducted. The measurement scale of the variables in this study refers to the Likert Scale, where each is made using a scale of 1 - 5 answer categories, where each answer is given a score or weight, namely the number of scores between 1 and 5, with the following details:

Table 3.1
Skala Likert

Nilai	Keterangan
5	Strongly Agree (SS)
4	Agree (S)
3	Disagree (KS)
2	Don't Agree (S)
1	Totally Disagree (STS)

B. Research Instrument Testing

"According to Suharsimi Arikunto (2010;265) a research instrument is a tool chosen and used by researchers in their activities to collect data so that the activity can run systematically and make it easier to process data". Instrument testing conducted in this study used the assistance of the Statistical Package for Social Science (SPSS) for Windows Release 22.0 computer program. The method used is associative hypothesis testing, namely knowing the relationship between two or more variables. Where the x variable (independent variable) is Work Discipline (X1) and K3 (X2), while the Y variable (dependent variable) is Work Productivity. There are several stages of testing research instruments, namely:

a. Validity Test

"According to Sujarweni (2015;160) validity testing is used to determine the feasibility of items in a questionnaire in defining a variable. This questionnaire generally supports a certain group of variables". Validity testing should be carried out on the boutique questions being tested for validity. The results of the calculated r are compared with the r table where df = n - 2 with a sig of 5%. If r table <r count then it is declared valid, while r table> r count then the data is invalid and will be set aside from further analysis.

According to Husainah, et al. (2011;12) validity is a measure that shows the level of validity or validity of an instrument. A valid instrument has high validity and vice versa.

Validity testing uses the Person Product Moment correlation technique with the following formula:

$$r = \frac{N(\Sigma XY) - (\Sigma X \Sigma Y)}{\sqrt{[N \Sigma X^2 - (\Sigma X)^2][N \Sigma Y^2 - (\Sigma Y)^2]}}$$

Information :

R = Correlation Coefficient

X = Item score

Y = Total item score

N = Number of samples (respondents)

b. Reliability Test

"According to Sujarweni (2015;172) Reliability is a measure of the stability and consistency of respondents in answering matters relating to question constructs which are dimensions of a variable and are arranged in a questionnaire form". Reliability testing can be carried out simultaneously on all questions. The tool for measuring reliability is Alpha Cronbach. If the Alpha value is > 0.600 then the variable is reliable, while if the Alpha value is <0.600 then the variable is not reliable.

C. Classical Assumption Test

"According to Gunawan (2016;92) the classical assumption test is a data test used to determine whether research data meets the requirements for further analysis, in order to answer the research hypothesis. If the data obtained cannot meet the requirements, the data must be replaced with new data that is in accordance with the research requirements that will answer the research hypothesis."

a. Normality Test

"According to Imam Ghozali (2011;160) the Normality Test aims to test whether in the regression model, the interfering variables or residuals have a normal distribution. As is known, the t and f tests assume that the residual values

follow a normal distribution. If this assumption is violated, the statistical test becomes invalid for small sample sizes. There are two ways to detect whether the residual distribution is normal or not, namely by graphical analysis and statistical tests. To test whether the data distribution is normal or not, an analysis is carried out with a graph by looking at the normal probability plot".

"From Ghozali (2011;160) the decision-making criteria using a probability plot are if the points are spread around the diagonal line and follow the direction of the diagonal line, the distribution pattern is said to be normal so that the regression model meets the normality assumption".

b. Multicollinearity Test

"From Ghozali (2012;105) the multicollinearity test aims to test whether a regression model has a correlation between independent variables. A good regression model should not have a correlation between independent variables. Multicollinearity testing is seen from the VIF and tolerance values. Tolerance measures the selected independent variables that are not explained by other independent variables. So a low tolerance value is the same as a high VIF value (because VIF = 1/tolerance). The cutoff value commonly used to indicate multicollinearity is a tolerance value ≥ 0.01 or the same as a VIF value ≤ 10".

c. Heteroscedasticity Test

"From Ghozali (2012;139) the heteroscedasticity test aims to test whether in the regression model there is inequality of variance from the residuals of one observation to another. The most common way used to detect the presence or absence of heteroscedasticity is to look at the scatterplot between the predicted values of the related (dependent) variables, namely ZPRED and its residuals SREID. Detection of the presence or absence of heteroscedasticity can be done by looking at the presence or absence of certain patterns in the scatterplot graph between SREID and ZPRED".

3) Validation

A. Data Analysis Method

1. Multiple Linear Regression Analysis

"According to Sugiono (2017;215) the regression analysis used is multiple regression analysis, namely an analysis that is used to predict the condition (rise and fall) of the criterion variable, if two or more predictor variables are manipulated". So multiple regression analysis will be carried out if the number of predictor variables is at least two. This multiple regression analysis can be expressed by the following mathematical formula:

$$Y = a + b_1X_1 + b_2X_2 + e$$

Information :

Y = Related variables
a = constant
b = regression coefficient

X1 = variable
X2 = Variable
e = error or other influence

2. Analysis of Determination Coefficient (R2)

"According to Imam Ghozali (2011;97) The coefficient of determination (R2) essentially measures how far the model's ability to explain the variation of the dependent variable. The value of the coefficient of determination is between zero and one. A small R2 value means that the ability of the independent variables to explain the variation of the dependent variable is very limited. A value close to one means that the independent variables provide almost all the information needed to predict the variation of the dependent variable. The R Square figure is obtained from data processing through the SPSS program which can be seen from the summary table of the R Square column". With the following formula:

$$KD = r^2 \, x \, 100\,\%$$

3. Hypothesis Test

Hypothesis testing is intended as a temporary answer to research questions regarding the variables to be studied, in this study the hypothesis is carried out to determine the effect of career development and work involvement on employee organizational commitment, then testing is carried out using:

a. Partial Test (t-test)

"According to Priyanto (2013; 50) the t-test is used to determine the independent variable partially on the dependent variable, whether the effect is significant or not in the research to be conducted by the researcher". The stages of testing are as follows:

Formulating the hypothesis:

Ho: $\beta = 0$, meaning there is no significant effect.

Ho: $\beta \neq 0$, meaning there is a significant effect.

1) Determining the critical value and level of significance
   The level of significance in this study is 5%, meaning the risk of making a decision error is 5%.
2) Decision making
   a. If the probability (sig t) > α (0.05) then Ho is accepted, meaning there is no significant partial influence of the independent variable (X) on the dependent variable (Y).
   b. If the probability (sig t) < α (0.05) then Ho is rejected, meaning there is a significant partial influence of the independent variable (X).

4. Results and Discussion

1) Data Instrument Test

Data instrument testing includes validity testing and reliability testing conducted to determine whether the instruments used in this study are valid and reliable. Below are the results of the validity and reliability testing research as follows:

a. Validity Test

Used to determine whether a questionnaire is valid or not. A model is said to be valid if the significant value is below 0.05 or 5%. The testing criteria are if r count > r table then the instrument or statement items are significantly correlated to the total score (declared valid). The number of data (n) = 60, and df = 63-3 is obtained, then the r table is 0.2500.

Table 4.1
Work Discipline Instrument Validity Test (X1)

Variable	Indicator	R count	R table	Information
DK	DK 1	0.597	0.250	Valid
	DK 2	0.488	0.250	Valid
	DK 3	0.260	0.250	Valid
	DK 4	0.275	0.250	Valid
	DK 5	0.325	0.250	Valid
	DK 6	0.395	0.250	Valid
	DK 7	0.309	0.250	Valid
	DK 8	0.352	0.250	Valid
	DK 9	0.283	0.250	Valid
	DK 10	0.390	0.250	Valid

Based on the table above, it shows that all statements from the Work Discipline variable are Valid. This is because all statements have a calculated r that is greater than the table r or calculated r > table r.

Table 4.2
Validity Test of Occupational Safety and Health Instruments /K3 (X2)

Variable	Indicator	R count	R table	Information
K3	K3 1	0.510	0.250	Valid
	K3 2	0.444	0.250	Valid
	K3 3	0.664	0.250	Valid
	K3 4	0.656	0.250	Valid
	K3 5	0.420	0.250	Valid
	K3 6	0.477	0.250	Valid
	K3 7	0.384	0.250	Valid

	K3 8	0.315	0.250	Valid
	K3 9	0.254	0.250	Valid
	K3 10	0.376	0.250	Valid

Based on the table above, it shows that all statements from the K3 variable are valid. This is because all statements have a calculated r that is greater than the table r or calculated r > table r.

Table 4.3
Validity Test of Work Productivity Instrument (Y1)

Variable	Indicator	R count	R table	Information
PK	PK 1	0.379	0.250	Valid
	PK 2	0.370	0.250	Valid
	PK 3	0.288	0.250	Valid
	PK 4	0.306	0.250	Valid
	PK 5	0.303	0.250	Valid
	PK 6	0.508	0.250	Valid
	PK 7	0.527	0.250	Valid
	PK 8	0.715	0.250	Valid
	PK 9	0.590	0.250	Valid
	PK 10	0.491	0.250	Valid

Based on the table above, it shows that all statements of the Work Productivity variable are Valid. This is because all statements have a calculated r that is greater than the r table or calculated r > r table.

b. Reliability Test

A questionnaire is said to be reliable if a person's answers to the questions are consistent over time. This data reliability testing uses statistical tools, with the Cronbach Alpha method. A construct or variable is said to be reliable if it provides a Cronbach Alpha value > 0.70 (Ghozali, 2013).

Table 4.5
Reliability Test Results of All Variables

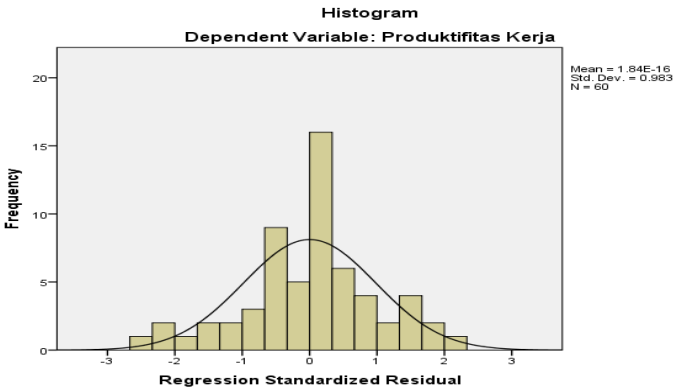
Variable	*Cronbach's Alpha*	Information
Work Dicipline	0.880	Reliabel
Occupational Safety and Health Work Productivity	0.916	Reliabel
Occupational Safety and Health Work Productivity	0.882	Reliabel

Based on the table above, it can be seen that all research variables, namely

work discipline, work safety and health and work productivity have Cronbach's Alpha> 0.70 so it can be concluded that all instruments in this research variable are reliable, so they can meet the reliability for use in further research.

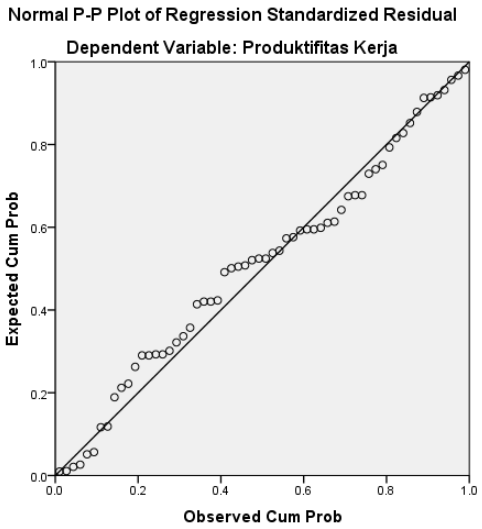
2) Classical Assumption Test

a. Normality Test



This normality test aims to test whether in the regression model, the dependent variable and the independent variable, both have a normal distribution or not. If the histogram is normally distributed, then the data obtained is declared normal, while if the PP plot forms a diagonal line, then the data obtained is declared normal.

Picture 4.1
Normality Test Results Normal Probability Plot



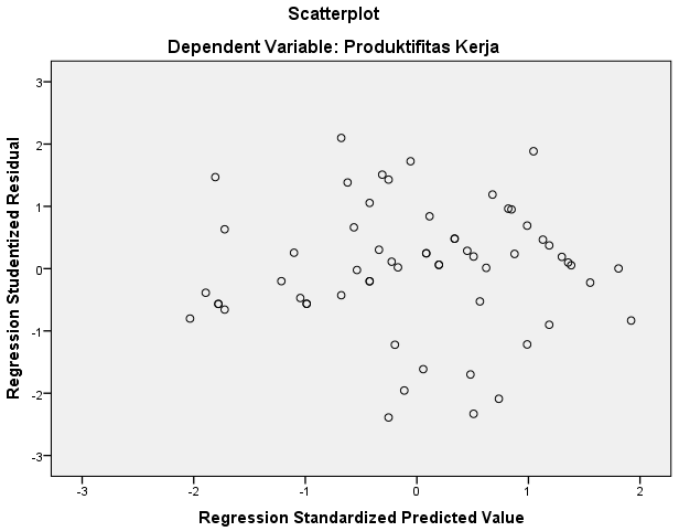
Picture 4.2
Normality Test Results Normal Probability Plot

Normal P-Plot and Histogram Graph are presented which can be seen that the data distribution points have followed the diagonal line. This condition illustrates that the research data in the regression model with related variables have been normally distributed.

b. Heteroscedasticity Test

In this study, the heteroscedasticity test was conducted using a scatterplot graph. Through a scatterplot, detecting the presence or absence of heteroscedasticity can be done by looking at the plot graph between the predicted value of the independent variable, namely ZPRED, with its residual SRESID.

Picture 4.3
Heteroscedasticity Test Results



The Scatterplot graph illustrated above is the result of heteroscedasticity testing. Overall, it can be seen that the data distribution points do not form a certain pattern and are randomly spread above and below the number 0 on the Y axis. This condition indicates that the regression model is free from heteroscedasticity problems and it is concluded that the regression model with related variables is worthy of being tested and used in research.

c. Multicollinearity Test

Multicollinearity Test is a test to see if there is a linear relationship between independent variables in a regression model. The test method that can be used is by looking at the Variance Inflation Factor (VIP) value and the Tolerance value. If the Tolerance value is greater than 0.10 and VIF <10, then the regression model does not have a multicollinearity problem.

Table 4.6
Multicollinearity Test Result

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	2.586	3.224		.802	.426		
	Work Dicipline	.144	.095	.111	1.519	.134	.908	1.101
	Occupational Health and Safety	.790	.072	.809	11.040	.000	.908	1.101

a. Dependent Variable: Work Productivity

Based on the table above, it shows that the VIF (Variance Inflation Factor) value of both variables has a value of 1.101 <10 and the Tolerance value of both is 0.908>0.10 in the variables used in the study. This shows that there is no perfect or near-perfect linear relationship between the independent variables. So that the regression model in this study did not find multicollinearity problems and has met the requirements of a good regression model.

3) Data Analysis Methods

a. Multiple Linear Regression Analysis

The data analysis used is a multiple linear regression test aimed at determining changes in the values of variables related to work productivity caused by independent variables consisting of work discipline and occupational safety and health. Based on the calculation results, the following results were obtained:

Table 4.7
Multiple Linear Regression Analysis

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.586	3.224		.802	.426
	Disiplin Kerja	.144	.095	.111	1.519	.134
	Keselamatan dan Kesehatan Kerja	.790	.072	.809	11.040	.000

a. Dependent Variable: Produktifitas Kerja

The table above shows the values of the multiple linear regression coefficients which are then entered into the regression equation and then interpreted. The results of the multiple linear regression equation are as follows:

Equation 1: PK = 2.586 + 0.144 + 0.790 + e

Based on the results of the linear equation, it can be interpreted as follows:

1. The constant value or a of 2.586 indicates that if the independent variables, namely work discipline and occupational safety and health, are considered constant, then work productivity is 2.586
2. The regression coefficient value β1 is 0.144, meaning that the higher the level of work discipline, the work productivity will also increase.
3. The regression coefficient value β2 is 0.790, meaning that the higher the level of occupational safety and health, the work productivity will increase

Table 4.7
Multiple Linear Regression Analysis

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.300	3.341		1.287	.203
	Work Productivity	.863	.078	.842	11.040	.000
	Work Dicipline	.004	.101	.003	.037	.971

a. Dependent Variable: Occupational Health and Safety

Equation 2: K3 = 4,300 + 0.863 + 0.004 + e

Based on the results of the linear equation, it can be interpreted as follows:

1. The constant value or a of 4,300 indicates that if the independent variables, namely work productivity and work discipline, are considered constant, then work safety and health are 4,300
2. The regression coefficient value β1 is 0.863, meaning that the higher the level of work productivity, the more attention to work safety and health increases

The regression coefficient value β2 is 0.004, meaning that this number is quite low compared to other values, meaning that there are still few employees who are not disciplined in using work safety and health

b. Analysis of R2 Determination Coefficient

The determination coefficient test shows the potential influence of all independent variables. The magnitude of the coefficient from 0 to 1, the closer to 0 the determination coefficient means that the ability of the independent variables

to explain the variation of the dependent variable is very limited. A value close to 1 means that the independent variables provide almost all the information needed to predict the variation of the dependent variable (Ghozali, 2013)

Table 4.8
Results of Determination Coefficient Test

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.850[a]	.722	.600	1.606	.722	73.979	2	57	.000

a. Predictors: (Constant), Keselamatan dan Kesehatan Kerja, Disiplin Kerja

b. Dependent Variable: Produktifitas Kerja

Based on the results of the first regression test from (Appendix), it can be seen that the Adjusted R Square value is 0.600, which means that the work discipline and K3 variables have an effect on work productivity of 60%, while the remaining 100% - 60% = 40% is influenced by other variables.

Table 4.9
Results of Determination Coefficient Test

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.843[a]	.711	.482	1.678	.711	69.993	2	57	.000

a. Predictors: (Constant), Disiplin Kerja, Produktifitas Kerja

b. Dependent Variable: Keselamatan dan Kesehatan Kerja

Based on the results of the second regression test from (Appendix), it can be seen that the Adjusted R Square value is 0.482, which means that the variables of work productivity and work discipline on K3 are 42.8%, while the remaining 100% - 42.8% = 51.8% is influenced by other variables.

c. Statistical Hypothesis Test Results

1. Partial Test (t-Test)

The test of this study, the t-test is used to test whether there is a significant partial influence of each independent (X) with the dependent variable (Y), namely work discipline and K3 on work productivity partially. This test is done by comparing t count with t table. If the probability of significance> 0.05 then Ho is accepted and Ha is rejected. If the probability of significance <0.05 then Ho is rejected and Ha is accepted. The way to find out the percentage of the t table distribution from this study is (df = n-k-1) where (n) is the number of respondents, namely 63. So df = 63-2-1 = 47. Where the percentage point is seen from the t table with a significance level of 0.05, the value is 1.295.

1) The Influence of Work Discipline on Work Productivity

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	18.775	5.043		3.723	.000
	Disiplin Kerja	.461	.159	.357	2.908	.005

a. Dependent Variable: Produktifitas Kerja

Table 4.10
Partial Testing Results t-Test

Based on the table above on the results of the t-test that can be, it is known that the calculated t value is greater than the t-table value (2.908> 1.295) and the p value is smaller than alpha (0.000 <0.05). So it can be stated that Work Discipline has a positive influence on Work Productivity so that H1 is accepted.

2) The Influence of K3 on Work Productivity

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	6.058	2.301		2.633	.011
	Keselamatan dan Kesehatan Kerja	.823	.069	.843	11.935	.000

a. Dependent Variable: Produktifitas Kerja

Table 4.11
Partial Test Results t-Test

Based on the table above on the results of the t-test obtained, it is known that the calculated t value is greater than the t-table value (11.935> 1.295) and the p value is smaller than alpha (0.000 <0.05). So it can be stated that K3 has a positive influence on Work Productivity so that H2 is accepted.

3) The Influence of Work Discipline and K3 on Work Productivity

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	4.300	3.341		1.287	.203
	Produktifitas Kerja	.863	.078	.842	11.040	.000
	Disiplin Kerja	.004	.101	.003	.037	.971

a. Dependent Variable: Keselamatan dan Kesehatan Kerja

Table 4.12
Partial Test Results t-Test

Based on the table above on the results of the t-test obtained, it is known that the calculated t value is greater than the t-table value (11.040> 1.295) and the p value is smaller than alpha (0.000 <0.05). So it can be stated that Work Discipline and K3 have a positive influence on Work Productivity so that H3 is accepted.

2) Interpretation of Results

a. The Influence of Work Discipline on Work Productivity

Based on the test results, the work discipline variable has a positive and significant effect on work productivity. This is personal and requires self-awareness, because discipline is the first lesson learned from an early age which can produce good things such as increasing performance in the company so that it can achieve targets and make superiors happy. Then the result is getting a bonus, promotion, or being trusted to carry out important projects. However, of the many employees who struggle to increase their work productivity by increasing discipline, there are also those who act as if they don't care and become indifferent. Going to work not according to office rules, doing tasks as they please or even carelessly. The result is that their work productivity decreases and does not meet employee qualifications and cannot achieve company targets, then ends with dismissal. From here it can be concluded that work discipline greatly influences work productivity.

The results of this study are in accordance with the research of Muhammad Sudwiyatmoko (2020) with the results of Work Discipline having a positive and significant effect.

b. The Influence of K3 on Work Productivity

Occupational Safety and Health or what we often abbreviate as K3, is quite familiar to workers who are required to wear safe attributes while working. If we look back, there is quite a lot of news about work accidents because workers are quite

indifferent to their own safety and the surrounding environment, the same as the location that the author is currently researching. The company has provided complete K3 equipment and equipment that is adequate for use, but there are still some who do not comply with using it properly and even some tools are only stored at home. We cannot underestimate K3 because in reality it greatly affects the progress of work, such as affecting performance productivity. If an employee has an accident while working, their productivity will decrease and may lag behind the targets that have been set.

The results of this study are in accordance with Nining Wahyuni, Bambang Suyadi, Wiwin Hartanto (2021). With the results of occupational safety and health or K3 having a positive and significant effect on work productivity.

c. The Effect of Work Discipline and K3 on Work Productivity

From the results of the study, work discipline and K3 have a positive and significant effect on work productivity, meaning that if the level of work discipline and employee concern for K3, it will be very possible for an increase in work productivity. Where it will cause a lot that the company can get or produce if all employees have such characteristics, but because many employees have narrow thinking who only want short-term results, it is undeniable that it is also a little difficult to achieve. However, the author is sure that when seeing these significant results, there are already many employees who are disciplined in their work and start to care about the importance of K3 in their work, so that their work productivity can be very good.

The results of this study are in accordance with Kevin Rei Samahati (2020) with the results of work discipline and K3 having a positive and significant effect.

5. Discussion

A. Conclusion

Work productivity in a company greatly influences the sustainability of the company's reputation, it can be a factor for other companies to entrust a project to the company itself. Moreover, if the company provides services that are needed by many parties, but besides work productivity there are many variables that greatly influence or support work productivity to be very prominent, namely work discipline and occupational safety and health or commonly abbreviated as K3. Although it is a strong variable to support success, there are also those who are still very indifferent to work discipline and K3, for work discipline many still violate working hours, dress regulations. While for K3 there are still those who forget the equipment that the company has provided such as personal safety equipment so as not to be electrocuted, helmets, shoes specifically for personal safety and others. It turns out that without us realizing it, these two variables greatly influence the optimization of work productivity, why is that? because if one is neglected to be implemented, the productivity of an employee can decrease greatly, either he is absent due to an accident at work or can be punished for lack of discipline at work. Based on the results of the research that has been conducted, it shows that from the 3 existing hypotheses, the same results are obtained, namely:

a. Work discipline has a significant positive effect on work productivity
b. K3 has a significant positive effect on work productivity
c. Work discipline and K3 have a significant positive effect on work productivity

B. Research Limitations

a. Researchers only focus on the effect of work discipline and K3 on work productivity.
b. There are limited sources of previous research references on work discipline, K3 and work productivity
c. Respondents in filling out the questionnaires given are sometimes less careful and careless.

C. Suggestions

a. Company
   The management of PT CITACONTRAC should make efforts to educate employees firmly and sanctions that are sufficient to deter employees who violate so that work discipline and K3 problems do not have a negative impact on work productivity in the company.
b. For Further Research
   1. This research can be used as material for further research to increase knowledge, especially in terms of work discipline, K3 and also work productivity.
   2. It is hoped that further researchers can conduct research on respondents who have different company characteristics as research objects, thus producing more varied research.

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