

THE INFLUENCE OF INFORMATION TECHNOLOGY AND THE WORKING ENVIRONMENT ON EMPLOYEE PERFORMANCE: A STUDY CASE AT YUS CORP MAKASSAR

Pengaruh Teknologi Informasi dan Lingkungan Kerja Terhadap Kinerja Pegawai Pada Yus Corp Makassar

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Abstract

This study aims to determine whether information technology and the work environment affect employee performance at Yus Corp Makassar. Data collection used primary data obtained from a questionnaire administered to a sample of 60 employees at Yus Corp Makassar. Analysis of the data used is descriptive analysis, and multiple linear regression. Sampling technique used is saturated samples. The results revealed the following findings: 1) Information technology has a positive and significant impact on employee performance. 2) The work environment does not have a positive direct effect on employee performance. 3.) There is a Simultaneous Influence of Information Technology and Work Environment on Employee Performance at Yus Corp Makassar

Keywords : *Information Technology; Work Environment; Employee Performance;*

A. INTRODUCTION

At the era of economic globalization, competition, change, and rapid development, they can have an impact on information technology. Information technology does not develop by itself; instead, it requires support from various factors to achieve effectiveness. Reliable information technology is one way to improve performance as it provides valuable information for decision-making within a company or organization. The implementation of information technology must be supported by qualified human resources to ensure its proper functioning. The success of developing quality human resources is influenced by leadership (Hasan, 2005).

Information technology is recognized as a competitive advantage for organizations or companies. Mcleod highlights that the use of information technology provides a competitive advantage by capturing market phenomena and customer desires. In the face of constant emergence of new startups and economic competition, effective and efficient policy-making is necessary to maintain the organization's existence. Lucas

and Spitler (1999) suggest that members of the organization must be capable of effectively utilizing technology for it to contribute to performance.

On the other hand, human resources are crucial and must be considered in all company activities. They play a determining role in the success of a company's activities. According to Lawrence (2018: 190), human resources are a crucial factor that determines the progress and failure of joint business and activities. The quality of human resources directly affects employee effectiveness and indirectly impacts morale. Optimal human resource development is essential to ensure employees can work towards the company's vision and mission.

Information technology plays a critical role in technology and digital product companies, as it supports data processing and completion of work tasks. Strategic planning and effective implementation of information technology are necessary to maximize the expected benefits. Yus Corp, located in Makassar, South Sulawesi, started as a startup named PT. Kioser Teknologi Indonesia in 2016, founded by Muhammad Yusuf Sirajuddin in Pangkep Regency. Over time, Yus Corp expanded its business opportunities by establishing new startups, including PT. Serpul Teknologi Indonesia, specializing in H2H Payment Point Online Bank services, and Digitalkan.co.id, a digital marketing startup.

Furthermore, it is not only information technology that have sufficient influence on employee performance. There must be an environmental factor in the form of adequate work facilities available to employees to support them to complete their tasks. The environment is a facility and infrastructure to facilitate work. As for previous research that has been carried out to find out how much influence the work environment has on employee performance, namely from Rismayanti Rasdam, Syamsu Alam and Andi Reni (2018) entitled "analysis of the effect of the work environment, compensation, working stress on job morale and its impact on performance" reveals that the work environment has a significant effect on employee performance.

The phenomenon that occurs at Yus Corp is that the work environment still requires a lot of improvement, such as electricity which often suddenly goes out and the availability of computer facilities that are not sufficient and air conditioning which is still not optimal so that it hinders some employee performance. Then the color of the room that creates a feeling of coolness is still lacking. In terms of spatial tidiness, it is still not optimal, where it is still found that the arrangement of work files is not neat. This is related to the ongoing renovation and development process.

Based on the aforementioned factors, the researcher is interested in conducting a study at Yus Corp Makassar to examine the factors influencing employee performance, including information technology, and the work environment. The research title is "The Effect of Information Technology and the Work Environment on Employee Performance at Yus Corp Makassar."

Research Problem Formulation:

Based on the research background, the following problem formulations can be identified:

1. Does information technology affect employee performance at Yus Corp?
2. Does the work environment affect employee performance at Yus Corp?
3. Does information technology and the work environment have a simultaneous Influence of Information Technology and Work Environment on employee performance at Yus Corp?

Research Objectives:

Based on the problem formulations, the research aims to:

1. Analyze the effect of information technology on employee performance at Yus Corp.
2. Analyze the effect of the work environment on employee performance at Yus Corp.
3. Analyze the simultaneous Influence of Information Technology and Work Environment on employee Performance at Yus Corp.

Research Benefits:

The expected benefits of this research are:

1. Benefits for researchers.
2. Benefits for Yus Corp Makassar.
3. Benefits for readers.

B. LITERATURE REVIEW

Theoretical Framework

Human Resource Management

According to Dessler (2015), human resources refer to the individuals within an organization or company. Human resource management encompasses processes such as employee acquisition, training, performance appraisal, compensation, labor relations, health and safety, and matters related to justice. Although human resources are recognized as the driving force behind organizational activities, experts hold various opinions on the subject (Gaol, 2014:14).

Information Technology

Information technology (IT) is generally described as the combination of computer technology and other technologies. Herda (2018) provides a comprehensive definition of IT as computer technology used for processing and storing information, along with communication technology used for transmitting information. Hansen and Mowen (2009:4) state that computer-based information technology greatly influences organizational information systems by delivering timely and accurate information. Williams and Sawyer (2003) define information technology as a technology that integrates computer computing with high-speed communication lines for transmitting data, voice, and video.

Work Environment

Fathoni (2006, p. 30) argues that the work environment comprises external conditions that affect individuals, both internally and externally, including the impact of globalization. Sedarmayanti (in Desi, 2018: 28) defines the work environment as the physical tools, materials, work methods, and arrangements encountered by individuals or groups in their work settings.

Performance

Thomson (2002:7) states that performance refers to the extent to which individuals contribute to an organization, encompassing factors such as the quality and duration of their output, attendance, and cooperative attitude. Performance generally refers to job performance or the actual achievement of work tasks and responsibilities. In the context of management, performance indicates the quantity and quality of work achieved by individuals in carrying out their assigned functions. Organizations typically prioritize efforts to optimize human resource performance, as HR is a critical factor in achieving overall organizational performance.

Empirical review

Hyphothesis

The hypothesis serves as a temporary answer to the research problem, which requires empirical testing or verification to determine its validity. Based on the problem identification, theoretical study, and conceptual framework, the following hypotheses are formulated:

- H1: There is an Influence of Information Technology on Employee Performance at Yus Corp Makassar.
- H2: There is an influence of the work environment on employee performance at Yus Corp Makassar
- H3: There is a Simultaneous Influence of Information Technology and Work Environment on Employee Performance at Yus Corp Makassar

Conceptual Model

The research framework is crucial in conducting a study. It provides a logical structure that outlines the researcher's thought process and presents a detailed description of the background, which serves as the main problem under investigation. Figure 1 illustrates the framework as follows:

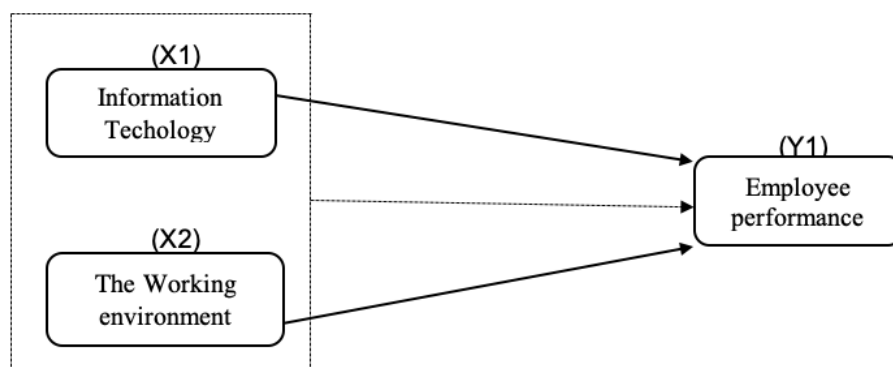


Figure 1: The Conceptual Model

C. RESEARCH METHOD

Location and Research Design

To gather the required data, the researchers conducted a study at Yus Corp Makassar, situated at Jl. Perintis Kemerdekaan, Puri Asri Raya Blok AE/5, Makassar, South Sulawesi. This study involves a literature review and data collection and analysis based on the information obtained from Yus Corp Makassar.

Population or Samples

The research population includes all Yus Corp Makassar employees with a total of 60 employees. The sampling method in this study used a saturated sample and used a structured questionnaire as the principal data collection tool to obtain specific information.

Data Collection Method

To collect research data, the authors use the following methods:

1. Questioner Method

In this case, the writer makes written questions which are then answered by respondents/sampling. And the form of the questionnaire used is closed, namely a questionnaire whose questions use multiple choice techniques or have answer choices, so that respondents just choose the desired answer.

The questionnaire technique used is designed to determine the work environment of human resources, infrastructure and work environment as well as employee performance and the data obtained from the questionnaire is the score of each variable studied. In the technique the author uses a Likert scale by applying five categories of answers, namely Strongly Disagree (STS), Disagree (TS), Neutral (KS), Agree (S), Strongly Agree (SS). The scores for the answers to questions or statements are as follows:

Table 1 Scores of the Likert. Model Scale Statement

Kategori	Skor				
	STS	TS	KS	S	SS
Positif	1	2	3	4	5

2. Documentary Method

The documentary method is a data collection tool called a document recording form, and the data source is in the form of notes or available documents. This method is used to obtain data about; active employee data, at Yus Corp Makassar.

Data Analysis Method

Descriptive Statistics

1. Description of Information Technology (X1)

A total of 60 respondents provided their responses to the indicators of the working environment as presented in the questionnaire, including: ease of learning and operation (X1.1), controllability and customization based on wishes and needs (X1.2), clarity and comprehensibility of usage (X1.3), flexibility (X1.4), quick acquisition of skills (X1.5), user-friendliness (X1.6), efficiency in speeding up work (X1.7), support for performance improvement (X1.8), productivity enhancement (X1.9), simplification of work processes (X1.10), and contribution to performance (X1.11). Based on the respondents' feedback regarding information technology, an average information technology index of 4.00 was obtained, indicating a high/good perception. The indicator that contributed the most to shaping the information technology variable was the clear and understandable usage indicator, with the statement "The information technology/application you use in the company is easy to learn and operate," having an average value of 4.30. On the other hand, the indicator with the lowest contribution was the flexible indicator, with the statement "The information technology used is a flexible application," having an average value of 3.73.

2. Description of The Work Environment Variables (X2)

A total of 60 respondents provided their responses to the the work environment indicators presented in the questionnaire, which include: Workplace (X2.1), Facilities in the workplace (X2.2), Cleanliness in the workplace (X2.3), lighting in the workplace (X2.4), and Calmness in the workplace (X2.5). Based on the respondents' feedback regarding Work Facilities, an average Work Facilities index of 3.89 was obtained, indicating a high/good perception. The Cleanliness indicator, with the statement "The condition of your work environment is clean and tidy," contributed the most to shaping the Work Facilities variable, with an average value of 4.20. On the other hand, the Calmness indicator, with the statement "Your place of work is far from noise," had the lowest contribution, with an average value of 3.50.

3. Description of Employee Performance Variables (Y1)

A total of 60 respondents provided their responses to the indicators of employee performance presented in the questionnaire, which include: quality of work (Y1.1), job knowledge (Y1.2), cooperation (Y1.3), and dependability (Y1.4). Considering the respondents' feedback on performance, an average Performance index of 4.10 was obtained, indicating a high/good perception. The indicator that contributed the most to shaping the performance variable was the cooperation indicator, with the statement "You are able to build good cooperation with fellow co-workers and respect each other," having an average value of 4.30. Conversely, the indicator of quality of work, with the statement "The work you do is in accordance with company procedures and policies," had the lowest contribution, with an average value of 3.95.

Analysis of the data that the authors use in this study using quantitative descriptive analysis. Quantitative research data analysis techniques using inferential statistics. In inferential statistics, there are parametric and non-parametric statistics. The researcher uses parametric statistics for the reason that the type of data analyzed is on an interval scale. Parametric statistics fulfill many assumptions. The main assumption is that the data to be analyzed must be normally distributed in the

regression, the assumption of linearity must be met, so that the data obtained from this study are normally distributed, and in the regression, the assumption of linearity must be met, so that the data obtained from the research results are tested for normality and linearity before being used. to test the hypothesis.

Research Instrument Test

a. Validity Test

In this study, to process and analyze the validity test, the IBM SPSS (Statistical Program for Social Science) software version 25.00 for Windows was used by looking at the value of $r > r_{\text{count}}$, compared to the r -critical value ($=0.3$). If the value of r -count is greater than r -critical ($=0.3$), then the questionnaire is said to be valid. Vice versa, if r -count is smaller or less than r -critical ($=0.3$), then the questionnaire is invalid. The analysis used is to correlate each item's score with the total score (sum of all item scores) using the *Pearson Correlation* formula.

In the Validity test all indicators of the variables were tested Valid. This is because the r count of each indicator is proven r table. Therefore, the data is valid.

b. Reliability Test

In this study, to process and analyze the reliability test, the authors used SPSS version 25.00 for windows, namely by comparing r -alpha (Cronbach's alpha) with r -critical (0.6). If r -alpha is positive and greater than r -critical (0.6), then the instrument is reliable. On the other hand, if r -alpha is negative or r -alpha is less than r -critical (0.6), then the instrument is not reliable. The requirement to test the reliability of the research data instrument is the "Croanbach's Alpha" value above 0.60 or 60%.

In the reliability test, it is proven that all the indicator variables are tested to be reliable. This is because Cronbach's alpha is 0.60 so the data is reliable.

c. Hypothesis Test

Hypothesis testing was carried out by correlation and regression analysis which was carried out with the help of a computer through the SPSS version 25.0, regression analysis and F test.

D. EMPIRICAL RESULTS AND DISCUSSION

1. Hypothesis Test

Hypothesis testing is an important part of research, after the data is collected and processed. Its main use is to answer the hypothesis made by researchers.

1. Multiple Linear Regression Analysis

This regression analysis is used to calculate the influence of the independent variables, namely information technology (X1) and the working environment (X2) on the dependent variable, namely employee performance (Y1).

Table 2 Regression Equation

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	12.437	2.003		6.209	.000
	Teknologi Informasi	.109	.033	.420	3.290	.002
	Lingkungan Kerja	-.011	.093	-.015	-.119	.906

a. Dependent Variable: Kinerja

Source: SPSS 25.0 processing results, 2022

Based on Table 2, the regression equation is obtained as follows:

$$Y = 12.437 + 0.109 X_1 + -0.011 X_2$$

From the above equation can be interpreted as follows:

- Average - average employee performance of 12,437, if there is no independent variable
- Employee performance will increase by 0.109 units for each additional unit of X1 (Information Technology). So if Information Technology increases by 1 unit, then Employee Performance will increase by 0.109 units assuming the other variables are held constant.
- Employee Performance will increase by -0.011 units for each additional unit of X2 (Work Environment), So if the Work Environment increases by 1 unit, then Employee Performance will increase by -0.011 units assuming the other variables are considered constant.

Based on the interpretation above, it can be seen that the increase in Information Technology and Work Environment will be followed by an increase in Employee Performance.

2. Coefficient of Determination (R²)

To find out the contribution of the independent variable information technology (X1) and the working environment (X2) to the dependent variable Employee Performance (Y1) the value of R2 is used, the value of R2 is as shown in Table 3 below:

Table 3 Correlation Coefficient and Determination

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.415 ^a	.173	.144	1.509

a. Predictors: (Constant), Lingkungan Kerja, Teknologi Informasi

Source: SPSS 25.0 processing results, 2022

Based on table 3 above, it shows that the value of Adjusted R Square is 0.144, which shows the magnitude of the coefficient of determination in this study, which is equal to 14.4%. This means that information technology and work environment contribute 14.4% to performance, while the remaining 85.6% is influenced by other variables not used in this study such as work discipline, education, training, work experience and others.

3. Partial t/test

The t test is used to determine whether each independent variable partially has a significant effect on the dependent variable.

Table 4 t/Partial Test Results

		Coefficients ^a				
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	12.437	2.003		6.209	.000
	Teknologi Informasi	.109	.033	.420	3.290	.002
	Lingkungan Kerja	-.011	.093	-.015	-.119	.906

a. Dependent Variable: Kinerja

Source: SPSS 25.0 processing results, 2022

Based on Table 4, the following results are obtained:

$$T \text{ table} = t(a/2; n-k-1) = t(0.025; 57) = 2.002$$

- First Hypothesis Testing (H1)

The sig value is known. For the effect of X1 on Y1 is 0.002 < 0.05 and the calculated T value is 3.290 > T table 2.002, so it can be concluded that H1 is accepted which means that there is an influence of X1 on Y1.

- Second Hypothesis Testing (H2)

The sig value is known. For the effect of X2 on Y1 is 0.906 > 0.05 and the calculated T value is -0.119 > T table 2.002, so it can be concluded that H1 is rejected which means there is no influence of X2 on Y1

From the overall results it can be concluded that information technology variables have a significant influence on employee performance simultaneously and partially. And from this it can be seen that the two independent variables that have the most dominant influence on employee

performance is the information technology variables because they have the greatest beta and t count coefficients.

4. F Test

Table 5 F / Simultaneous Test Results

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	27.065	2	13.532	5.943	.005 ^b
	Residual	129.785	57	2.277		
	Total	156.850	59			

a. Dependent Variable: Kinerja

b. Predictors: (Constant), Lingkungan Kerja, Teknologi Informasi

Source: SPSS 25.0 processing results, 2022

$$F \text{ table} = F(k;n-k) = F(2;58) = 3.16$$

- Testing the Third Hypothesis (H3)

Based on the output above, it is known that the sig. For the effect of X1 and X2 simultaneously on Y is $0.005 < 0.05$ and the calculated F value is $5.943 > F$ table 3.16, so it can be concluded that H3 is accepted, which means that there is an effect of X1 and X2 simultaneously on Y1.

The conclusions from the results of this study are as follows, based on Tables 4 and 5:

1. The effect of information technology on employee performance at Yus Corp Makassar is significant ($p\text{-value} = 0.002 < 0.05$). This implies that information technology has a direct and positive effect on employee performance. Consequently, it can be concluded that the utilization of information technology at Yus Corp Makassar contributes to improving employee performance.
2. The effect of the work environment on employee performance at Yus Corp Makassar is not significant ($p\text{-value} = 0.906 > 0.05$). This indicates that the work environment does not have a significant impact on improving employee performance. Therefore, it can be concluded that the work environment at Yus Corp Makassar does not play a substantial role in enhancing employee performance.
3. Based on the output above, it is known that the sig. For the effect of X1 and X2 simultaneously on Y is $0.005 < 0.05$ and the calculated F value is $5.943 >$

F table 3.16, so it can be concluded that H3 is accepted, which means that there is an effect of X1 and X2 simultaneously on Y1.

5. Hypothesis Result

1. The hypothesis to determine the effect of information technology on performance is as follows:
H0 : There is no direct and significant effect of information technology on performance.
H1: There is a direct and significant effect of information technology on performance.

Based on Table 4 above, the information technology variable obtained a P value of 0.002 where this value is < 0.05 , thus concluding that H1 is accepted, meaning that information technology has an effect on performance.

2. The hypothesis to determine the effect of the work environment on performance is as follows:
H0 : There is no direct and significant effect of the work environment on performance.
H1: There is a direct and significant effect of the work environment on performance.

Based on Table 4 above, in the work environment a P value of 0.906 is obtained where this value is $0.906 > 0.05$ which concludes that H0 is accepted, meaning that the environment has no effect on performance.

3. The hypothesis to determine the effect of the work environment on performance is as follows:
H0 : There is no simultaneous effect of information technology and the working environment simultaneously on Y1
H1: There is a simultaneous effect of information technology and the working environment simultaneously on Y1

Based on Table 5 above, in the work environment a P value of 0.005 is obtained where this value is $0.005 > 0.05$ which concludes that H1 is accepted, which means there is an effect of X1 and X2 simultaneously on Y1.

E. CONCLUSION

The conclusions from the results of this study are as follows:

1. Information technology affects employee performance at Yus Corp Makassar. The implementation of information technology has contributed to improved performance among employees. This supports the acceptability of hypothesis (H1), which states that information technology affects performance at Yus Corp Makassar.^[1]_[SEP]

2. The work environment does not have a significant impact on employee performance at Yus Corp Makassar. This suggests that hypothesis (H2), which proposes that the work environment affects performance, is rejected.
3. The simultaneous (together) effect of each independent variable on employee performance is carried out by testing the F-test. From the results of multiple linear regression analysis, it is obtained that the independent variables have a significant effect simultaneously on employee performance. So it can be concluded that testing the hypothesis which states that there is a simultaneous (simultaneous) effect of the independent variables on the Employee Performance variable is acceptable.

As for recommendations for practitioners, especially managers and stakeholders in a company, it is crucial to prioritize the maintenance of information technology, employee and the work environment to continually enhance and optimize employee performance, ultimately driving the company's development. For academicians, it is suggested to further investigate additional variables that have not been explored in this study, such as employee satisfaction, employee loyalty, customer satisfaction, and others.

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