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Analysis of E-technology Support, E-digital Competence and E-work procedures on the Performance of Employees of PosIND Kediri branch

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Abstract

Research aim *: This study aims to understand how digital technology support, digital skills, and electronic work procedures affect employee performance at PosIND Kediri.*

Design/Methode/approach *: This research uses a quantitative approach by collecting data through interviews and questionnaires. Data analysis includes validity test, reliability test, multiple linear regression, classical assumption test, and t test and F test using SPSS version 25.0.*

Research Finding *: The results showed that the regression model obtained was Y = 1.242 + 0.064X1 + 0.285X2 + 0.598X3, with a constant value of 1.242. This means that without changes in the independent variables, employee performance remains at 1.242. The regression coefficient shows that e-technology support, e-digital competence, and e-work procedures contribute positively to improving employee performance by 0.064, 0.285, and 0.598, respectively. With a coefficient of determination of 0.752, it can be concluded that the three variables affect employee performance by 75.2%, while the remaining 24.8% is influenced by other factors not included in this study.*

Theoretical contribution/originality *: This study reinforces the theory that proper technological support, competence, and work procedures significantly influence performance improvement.*

Practitione/policy implication *: This research provides guidance for posIND to focus on technological and procedural development to optimize employee performance.*

Research limitation *: This study is limited to a specific sector, making the results not broadly generalizable. Future studies are recommended to expand the sector coverage and include other relevant variables.*

Keywords *: E-technology support, E-digital competency, E-work procedures, employee performance.*

1. Introduction

Technological developments have significantly influenced the digitalization of operational systems.This phenomenon is in line with the emergence of the industrial era 4.0, which affects almost all aspects of life, including logistics and delivery. In this increasingly competitive era, businesses such as Pos Indonesia (PosIND) are expected to continue to adapt to technological advances to provide the best service. As a result, understanding dependable scenarios and conditions is critical for firms that want to

operate in a competitive environment. companies such as Pos Indonesia (PosIND) to deliver excellent services, organizations must continue to adapt to technological advances [1]. One of the strategic branches, namely the Kediri Branch of PosIND, faces a major challenge in integrating digital technology into their operations. E-technology support, E-digital competence, and the implementation of E-work procedures are key factors in determining employee performance [2].

Phenomena such as low adoption of digital systems or lack of employee training in the use of modern technology often hamper operational efficiency. E-technology support includes a wide range of organizational efforts to provide the necessary infrastructure and technology tools to support employee operations. The right application of technology can improve operational efficiency, communication, and decision-making in an organization. Adequate technological infrastructure, such as automation systems, task management software, and other digital applications, can speed up work processes and minimize manual errors. The acceptance of technology by employees is highly dependent on the perception of ease of use and benefits of the technology. Thus, organizations that provide appropriate technology support will be better able to increase employee productivity and job satisfaction [3].

E-digital competencies refer to the ability of individuals to understand, operate, and utilize digital technology in completing work tasks, E-digital competencies include technical abilities (*technical skills*), managerial, and analytical skills required in the digital age [4]. The development of digital competencies can improve work effectiveness, especially in organizations that rely heavily on technology. This competency also includes the ability to understand and utilize data in strategic decision-making, thus impacting the organization's overall performance [5].

In the modern world of E-procedures becoming an important part of digital system governance, such as the use of software for project management or online communication applications, digitization of work procedures can simplify workflows, improve accuracy, and speed up task completion. A clear and structured E-Procedure will help employees work more efficiently and minimize confusion in the implementation of tasks. Therefore, It's critical that organizations make sure the procedures implemented are not only technologically integrated but also customized to operational needs and employee capacity [6].

Employee performance contribution is the actual result obtained from the work process in an organization within a certain period of time, this is influenced by a combination of motivation, ability and all these variables are calculated through a work appraisal system. Performance reflects the results obtained by both profit-oriented and non-profit organizations over a period of time. Performance is influenced by ability factors, including IQ and skills from education or training, as well as motivational factors, namely the mental attitude of employees that encourage them to achieve maximum work performance [7].

Previous research has emphasized the importance of technology support in improving employee performance, where E-technology plays a key role in facilitating more efficient communication and workflows [8]. Furthermore, E-digital competencies are considered a factor that supports employees' adaptation to rapid technological changes, thus affecting their productivity and ability to carry out daily tasks [9]. In addition, previous research has also shown that the implementation of clear and

structured work E-procedures can improve operational effectiveness and reduce possible errors in work [10]. However, although many studies examine the impact of E-technology, E-digital, and E-procedure separately, there is still a lack of research that integrates these three factors in the context of companies such as PosIND Kediri Branch, which requires further research to understand how these three factors interact with each other in improving overall employee performance.

The rapid advancement of digital technology has transformed various industries, including the postal and logistics sector. As a company operating in this industry, PosIND Kediri Branch must continuously adapt to technological developments to maintain efficiency and competitiveness. One of the key factors influencing employee performance in a digitally evolving work environment is the integration of e-technology support, e-digital competence, and e-work procedures. The ability of employees to utilize digital tools effectively, follow structured work procedures, and receive adequate technological support plays a crucial role in improving productivity and service quality

Despite the implementation of digital systems, challenges remain in optimizing employee performance due to insufficient e-technology support, varying levels of e-digital competence, and ineffective e-work procedures. Some employees may struggle to adapt to new digital tools, while inadequate work procedures can hinder operational efficiency. Therefore, it is essential to analyze the impact of e-technology support, e-digital competence, and e-work procedures on employee performance at PosIND Kediri Branch. By understanding these relationships, the company can develop strategies to enhance digital readiness, improve workflow efficiency, and maximize employee productivity in an increasingly technology-driven environment. The higher the support for E-technology, digital E-competence, and the implementation of clear E-work procedures, the more employee performance will improve at the Kediri Branch PosIND.

1.1. Statement of Problem

Examine and determine the impact of e-technology support on employee performance at the Kediri Branch IND Post, the degree to which employee e-digital competencies enhance work productivity, and the effects of e-work procedure implementation on employee accuracy and efficiency.

The goal of this study is to analyze how employee performance at PosIND Kediri Branch is affected by e-technology assistance, employee performance is affected by e-digital competencies, and employee performance is affected by e-work procedures.

1.2. Research Objectives

This kind of study is known as causal associative research, which seeks to determine the cause-and-effect link between two or more variables. This research aims to explain interrelationship between the affected employee performance and the influencing e-technology support, e-digital competencies, and e-work procedures.

This study takes a quantitative strategy, which is defined as one in which statistical formulas are used to carry out research along with the data is expressed as numerical values or numbers that can be computed methodically. On this researches, the researcher employed with quantitative methodology to decide the influence of assessing e-technology support, e-digital competency, and e-work practices on employee performance.

A population is a complete object or individual that possesses particular traits that are the target of investigation. A population can be a person, animal, object, or phenomenon that is to be studied. All employees make up the population on this researches.

A sampling strategy was used in this investigation. Sampling method known as random sampling is one in which each member of the entire population have an equal chance of being selected to be part of the sample. This technique aims to ensure that the samples taken are a representative of the population fairly, therefore, obtained from the results this study can be generalized more accurately and precisely.

The ideal size of sample is determined using of Slovin formula. Size of sample is 60 respondents are determined through calculation, and this will give a reliable picture of how these factors affect employee performance.

2. Method

A questionnaire is a data collection method in which respondents will be asked to respond to a series of written questions. The questions can be delivered in person, by post, or online. Questionnaires come in two varieties: closed and open. In this instance, the questionnaire is closed, meaning that respondents only need to select and directly respond to questions whose answers have already been given.

Employees at PosIND are the target audience for this questionnaire, which aims to analyze the effects of e-technology support, e-digital competency, and e-work procedures on worker performance.

In order to get primary data, complement other data collecting methods, and assess the results of other data collection methods, two or more people will speak and exchange questions and answers during an interview. Employees who support the questionnaire approach in data collection are the target audience for this interview. If the questionnaire method is not thorough, the interview method will be used to get more detailed information from the informant.

To guarantee reliable and significant results, the methodology employed in this study entails processing, evaluating, and extrapolating inferences from the data gathered. To evaluate the efficacy and dependability of the research tools, a number of data analysis methods were used. The validity test, which assesses whether the questionnaire items accurately measure the intended variables, is one of the most important methods employed. By ensuring that every survey question is in line with the goals of the study, this test raises the validity of the results. The researcher's instrument for this study is a questionnaire or a closed questionnaire in the form of a check list (√) with Likert scale measurements. There are multiple items with descriptive scale responses. The IBM SPSS Statistics 25 software was used to test this research tool for validity, which measures the validity of a questionnaire, and reliability, which measures a questionnaire that contains indications of variables.

3. Result and Discussion

The study's findings show that e-technology assistance, e-digital competency, and e-work procedures have a significant impact on PosIND Kediri Branch employees' performance. To find the results of multiple linear regression analysis show that employee performance is positively and significantly impacted by all three independent

factors, with e-digital competence having the largest effect. According to this, workers with greater degrees of digital competency are better able to adjust to new developments in technology, which boosts output and efficiency. Additionally, by giving staff members access to dependable digital tools and systems, e-technology assistance is essential to improving work processes. In the meantime, well-designed e-work processes help to create a more controlled and productive workflow, which guarantees that workers can complete their jobs successfully.

Results of research are consistent with previous research that emphasizes the importance of digital transformation in improving worker productivity. Given the significant relationship between employee performance and e-digital competency, firms should give priority to digital training programs that give staff members the know-how to effectively use e-technology systems. Additionally, by decreasing work interruptions and boosting operational efficiency, e-technology support and e-work procedure improvement can improve overall organizational performance. PosIND Kediri Branch may further maximize employee performance as digitalization continues to define the modern workplace by regularly updating its digital infrastructure, offering continuing training, and improving its e-work processes to satisfy changing technical needs.

Test Classic Assumption

Before conducting further analyzing multiple linear regression in this study, several conditions must be met, including passing basic assumption testing (classic assumptions) which includes test for autocorrelation, heteroscedasticity, multi-collinearity, and normality.

Test Normality

Testing to verify if the all data in this study are normally distributed. Normal distributions are a key assumption in many statistical studies, such as linear regression.

Table 1. Test Normality

Kolmogorov-Smirnov Normality Test			
			Non-standardized Residual Value
N			60
Normal Parameters[a,b]	Average		,0000000
	Standart. Deviate		1,60578427
The Most Extreme Difference	Absolute		,201
	Positive		,142
	Negative		-,201
Test Statistic			,201
Asymp. Sig. (2-tailed)			,000[c]
Monte Carlo Sig. (2-tailed)	Sig.		,014[d]
	95% Confidence Interval	Lower Bound	,011
		Upper Bound	,016
a. The test distribution is declared normal.			
b. Derived from data.			
c. Lilliefors' Significance Correction.			
d. Based on 10,000 sample tables, using a starting seed of 2000000.			

Source: raw data, processed (2024)

The value of sig is known based on table 3 of the Monte Carlo data normalcy test. The sig value > 0.05, which is 0.016, suggests that it is regularly distributed.

Test Multicollinearity

The multicollinearity test is used to determine whether there is a relationship between the independent variables in the regression model. and also relationship between independent variables in the regression model. A good regression model should not have a correlation between the independent variables and also the independent variables.

Table 2. Test Multicollinearity

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	1,242	1,585		,784	,436		
	E-Technology Support	,064	,104	,067	,617	,540	,377	2,655
	E-Digital Competencies	,285	,102	,264	2,784	,007	,490	2,039
	E-Work Procedure	,598	,122	,605	4,891	,000	,289	3,458

a. Dependent Variable: Employee Performance

Source: raw data, processed (2024)

Referring to the table above, the calculated Tolerance value shows that no independent variable has a Tolerance value below 0.10. Similarly, the results of the Variance Inflation Factor (VIF) calculation show that none of the independent variables exceeds the VIF value of 10. Based on these findings, it can be concluded that the independent variables in this regression model do not show multicollinearity, so it can be ascertained that there is no strong correlation between these variables.

Test Heteroscedasticity

This heteroscedasticity test is used with the aim of determining if the model regression model has residual variance not comparable among data; heteroscedasticity does not exist in a decent regression. The Glacier test was used in this investigation to test for heteroscedasticity at a significance level of 0.05 (5%).

Table 3. Heteroscedasticity Test

Coefficients					
	Non-standardized Coefficient	Standardized Coefficients		Colleration value statistics	
Type	Std. Error	Beta	Sig.	Tolerance	VIF
(Constant)	1,210		,019		
	,924		,416		
E-technology Support	,079	-,220	,303	,377	
	,082		1,039		,655
E-digital Competencies	,078	-,075	,689	,490	
	,031		,402		,039
E-working Procedure	,093	,046	,850	,289	
	018		190		,458

a. Dependent Factors: ABSS

Source: raw data, processed (2024)

According to the above table, there are no signs of heteroscedasticity because the significant values for E-technology support (x1), E-digital competence (x2), and E-work processes (x3) are 0.303, 0.689), and 0.859, respectively, where > 0.05.

Linear Regression Test

Coefficient of Determination (R2)

In regression models, this statistical metric is used to indicate the extent to which Variation in the dependent variable (Y) that can be explained by the independent variable (X).

Table 4. Output Determination Coefficient

Summary of Model				
Type	**R**	**R Square**	**Adjusted R Square**	**Standard Error of Estimation**
1	,867[a]	,752	,739	1,648

a. Predictors: (Constant), E-work procedures, E-digital competence, E-technology support

Source: raw data, processed (2024)

In the table above shown that the determination coefficient is 0.752, meaning that e-technology support, e-digital competence, and e-work processes contribute 75.2% to employee performance, while the remaining 24.8% may be influenced by other factors not examined in this study.

Test-T

Linear regression analysis uses statistical tests to examine of each independent variable impacts the dependent variable. This test aims to determine whether there is a significant relationship between the independent variable and the dependent variable.

Table 5. Test-T

Coefficients						
		Unstandardized Coefficients		**Standardized Coefficients**		
Type		**B**	**Std. Error**	**Beta**	**t**	**Sig.**
1	(Constant)	1,242	1,585		,784	,436
	E-technology support	,064	,104	,067	,617	,540
	E-digital competencies	,285	,102	,264	2,784	,007
	E-working procedure	,598	,122	,605	4,891	,000

a. Dependent Variable: Employee performance

Source: raw data, processed (2024)

1. If x1 has a significance level of 0.540 > 0.05, it has no discernable influence on variable y.
2. X2 variables has a substantial influence on variable y with a sig value of 0.007 < 0.05.
3. X3 variable has very significant influence on variable y when its sig value is 0.000 or less than 0.05.

Test-F

In a multiple linear regression analysis, the simultaneous influence of independent factors on dependent variables is studied using a statistical test to check if the regression model is overall significant.

Table 6. Test F

ANOVA

Type		Sum of Squares	Df	Mean Average Square	F	Sig.
1	Regression	462,266	3	154,089	56,719	,000B
	Residual	152,134	56	2,717		
	Total	614,400	59			

a. Dependent variable: Performance of employees

b. Constant, e-work practices, e-digital proficiency, and e-technology assistance are predictors

Source: raw data, processed (2024)

According to the table representing the above results, F counts 56.719 and F table 2.769, therefore there are statistically significant impact between independent factors combined on dependent variables.

Multiple Regression Analysis

In accordance with the results of the calculations that the researchers have done, the regression equation can be obtained which is explained as follows:

Regression model : **Y= 1.242 + 0.064X1 +0.285X2 + 0.598 X3**

1. The employee performance value is 1.242 if the support for e-technology, e-digital composition, and e-procedure is constant, as indicated by the value of a = 1.242.
2. b 1 = 0.064 indicates that employee performance will rise by 0.064 if the E-digital and E-procedure competency scores remain constant and E-technology support rises by 1 point. A positive value coefficient indicates that employee performance and e-technology support are positively correlated; the more an employee supports e-technology, the better the employee performs.
3. b 2 = 0.285 indicates that employee performance will rise by 0.285 if the values of E-technology support and E-work processes remain constant and E-digital competence rises by 1 point. A positive value coefficient indicates that employee performance and e-digital competency are positively correlated; the higher an employee's e-digital competency, the better their performance.
4. According to B 3 = 0.598, an employee's performance will rise by 0.598 if the values for e-technology support and e-digital competence remain constant and the work procedure is improved by one point. A positive value coefficient indicates that employee performance and work E-procedures are positively correlated.

4. Conclusions

The data analysis and discussion results indicate that e-technology support positively impacts employee performance, as shown by a significance value of 0.540, which exceeds 0.05. Meanwhile, e-digital competence significantly affects employee's performance, with a significance value of 0.007, which is below 0.05. Similarly, e-work procedures also have a significant impact, with a significance value of 0.000. Furthermore, when analyzed together, e-technology support, e-digital competence, and e-work procedures collectively influence employee performance, as indicated by a p-value

of 0.000, which is below 0.05. The regression model suggests that enhancing these three aspects can effectively improve employee performance.

This study used a quantitative technique to analyze the effects of e-technology support, e-digital competence, and e-work procedures on the employee's performance at PosIND Kediri Branch. To better understand why e-technology support, e-digital competence, and e-work procedures may have a negative or negligible effect on employee performance under particular circumstances, more research is necessary to examine the effects of these factors on employee performance using a qualitative approach.

In order to increase employee performance, PosIND Kediri Branch is advised to strengthen e-technology support, e-digital competence, and e-work procedures in light of the study's findings. Upgrading technical equipment and offering instruction on how to use it to boost productivity are two ways to improve e-technology assistance. Additionally, enhancing staff members' e-digital competency necessitates regular training initiatives that keep up with developments in digital technology, including workshops or internal training. Additionally, by regularly assessing and improving current workflows, e-work methods can be optimized to produce a more organized and efficient system, which will ultimately improve employee productivity and overall organizational performance.

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