MEASURING PT. AEI EMPLOYEE PERFORMANCE : IN TERMS OF OCCUPATIONAL HEALTH AND SAFETY (K3) AND COMPETENCY

Susanto[1], Akka Latifah Jusdienar[2], Hikmah Rahma[2]
[1]Student of Management, Faculty of Economic and Business, Universitas Mitra Bangsa, Jakarta, 12530, Indonesia
[2]Lecturer of Management, Faculty of Economic and Business, Universitas Mitra Bangsa, Jakarta, 12530, Indonesia
Corresponding Author Email : susanto@unpam.ac.id akkayusdinar@gmail.com
hikmah.rahmah@gmail.com

Abstract

This research aims to analyze the influence of occupational health and safety (K3) on employee performance at PT. AEI South Jakarta, to analyze the influence of competency on employee performance at PT. AEI South Jakarta, to analyze the influence of occupational health and safety (K3) and competency together on employee performance at PT. AEI South Jakarta. Analysis in the research uses SEM PLS, where Structural Equation Modeling (SEM) is structural equation modeling in the form of a set of statistical methods based on measurements and structural models. The sample in this research is employees at PT. AEI South Jakarta as many as 126 employees will be used as respondents to fill out the questionnaire using the Slovin sampling technique. The research results state that K3 has a significant positive effect on employee performance, competency has a significant positive effect on employee performance, K3 and competency together have a significant effect on employee performance. K3 and competency contribute to employee performance by 77.6%.

I.   INTRODUCTION

The phenomenon that occurs in terms of work performance of employees at PT. AEI is still unable to provide good performance. This can be seen from the Work Quantity indicator, employees experiencing a decrease in productivity, resulting in a lack of output or expected results, an increase in the number of jobs delayed or not completed. From the punctuality indicator, there is an increase in delays in providing services to customers, missing important deadlines, such as sending reports or test results within the specified time.

Work performance of employees at PT. AEI is still not able to provide good performance. There are still several performance measures that have not reached the target. In measuring the level of performance, it can be seen based on the quality of work, quantity of work and timeliness of work completion. In 2019 – 2023 the quality of work at PT. AEI has not been able to achieve the expected targets, namely in 2019 it was 78%, in 2020 it was 84%, in 2021 it was 79%, in 2022 it was 82% and in 2023 it was 85%. In 2019 - 2023, regarding the quantity of work, it was also not able to reach the expected target, namely in 2019 it was 81%, in 2020 it was 83%, in 2021 it was 65%, in 2022 it was 69% and in 2023 it was 75%. In 2019 - 2023, regarding timeliness, it was also not able to reach the expected target, namely in 2019 it was 73%, in 2020 it was 75%, in 2021 it was 76%, in 2022 it was 79% and in 2023 it was 84%. The employee performance phenomenon that occurs needs improvement so that the expected performance meets the target.

The phenomenon regarding occupational health and safety is regarding employee discipline in using PPE, employees at PT. AEI is still not disciplined, this is based on data on the use of PPE where employees still neglect to use it, such as wearing safety helmets, hats/hoods, headgear, ear plugs, ear muffs, gloves, medical masks. , ordinary glasses (spectacle goggles), goggles, respiratory protective equipment, hats and foot protectors, there are still many employees who are not disciplined in using PPE. This proves that the employees of PT. AEI still pays little attention to occupational safety and health factors, even though the hospital has provided complete and standard PPE in accordance with applicable regulations, which results in employee attendance levels that are not optimal due to the impact of disease in the work environment.

Based on recorded data, the level of employee discipline in using personal protective equipment (PPE) while within the PT. AEI is still low, there are still 20% who have not used PPE in accordance with existing regulations, maximum efforts need to be made to increase the use of personal protective equipment both at work and in the PT environment. AEI.

The phenomenon of competence can be seen based on the level of competence at PT. AEI still does not have equality, staff competency levels are higher than other competency levels. This proves that there is no equality in competency levels at each level, because achieving competency levels depends on the performance and achievements obtained from employees. So there is a need for training and education for employees so that the level of competency at PT. AEI becomes equal.

Based on existing competency level data, it appears that there is a mismatch in the skills possessed by employees at PT. The AEI is quite high, this proves that there is a problem regarding differences in skills and the work being done which will reduce employee performance and job satisfaction because work that does not match the skills will cause employees discomfort in doing the work. So it's best if employees at PT. AEI pays more attention to skills and the work that employees will be given.

II.   LITERATURE REVIEW

Occupational Health and Safety (K3)

Occupational health and safety is a field related to the health, safety and welfare of people who work in an institution or project location. (Mustard, C. A., & Yanar, B., 2023). Occupational health is an effort to keep employees healthy while working, meaning that working environment conditions should not make employees unhealthy or sick. (Dietz, C., & Zacher, H., 2023).

Occupational health is a condition that is free from physical and psychological disorders caused by the work environment. (Awada, M., et. al, 2023). Health risks can occur due to factors in the work environment that exceed the specified time period and environments that cause stress or physical disorders. (Karthick, S., et. al., 2023). Meanwhile, work safety is a condition that is safe or safe from suffering and damage or loss in the workplace in the form of the use of machines, equipment, materials and processing processes, work floor and work environment, as well as work methods. (Yang, J., et. al., 2023). Safety risks can occur due to aspects of the work environment that can cause fires, electric shocks, cuts, bruises, sprains, broken bones, as well as damage to limbs, vision and hearing. (Mohsan, S. A. H., et. al., 2023).

Competence

Employee competency is the ability to carry out work or tasks that are based on skills and knowledge and supported by the work attitudes required by the job. The skills or abilities required of an employee as demonstrated by the ability to consistently provide an adequate or high level of performance in a job function. Competency is a term that many people often hear and say. We often hear or even say this terminology in various uses, especially in relation to human resource development. (Muzam, J., 2023). Competency is an individual's ability to carry out a job correctly and have excellence based on matters relating to knowledge, skills and attitude. (Malhotra, Ret. al, 2023).

Employee performance

Performance is the level of productivity of an employee, relative to his colleagues, on several results and behaviors related to tasks. Performance is influenced by work-related variables including role-stress and work/non-work conflict. (Mesmer-Magnus, J., et. al 2023).

A person's performance is a combination of ability, effort and opportunity which can be assessed from the results of their work. Individual performance is influenced by effort, ability and environmental situations. (Susanto, S., & Halim, I. (2020)

III.   METHODS

Analysis in the research uses SEM PLS, where Structural Equation Modeling (SEM) is structural equation modeling in the form of a set of statistical methods based on measurements and structural models. According to Hair et al (2010) SEM analyzes the relationship between constructs or latent variables and indicators and tests several dependent variables simultaneously using several independent variables. SEM is often also called latent variable analysis or partial least squares. Meanwhile, Partial Least Square (PLS) is a powerful analysis technique that uses scale measurements without making assumptions about data or conditions and can be used when the sample size is small (Ghozali, 2013). The software used in this PLS SEM analysis is Smart PLS 4 .
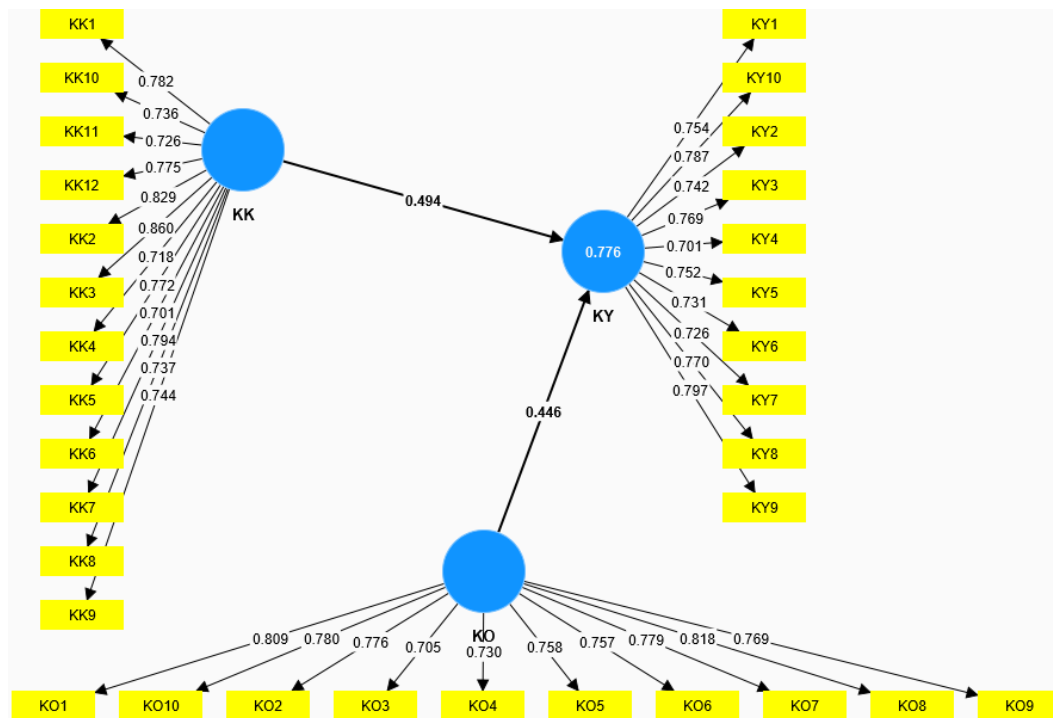
IV.   RESULTS

Figure 1. Cross Loading SEM PLS with smart PLS 4

V.   DISCUSSION

Model Measurement (Outer Model).

The first testing stage carried out was to measure the reliability indicator by looking at the outer loading factor which describes the correlation value between the indicator and its construct. The results of data processing with smart PLS 4 show that for each indicator, the outer loading factor has a value of > 0.70, which is said to be ideal, which means that the indicator is valid for measuring the construct.

The next test uses internal consistency or construct reliability. Namely, by looking at the results of Composite Reliability and Cronbach's Alpha, Cronbach's Alpha assesses construct reliability as lower than Composite Reliability. The limit values for Composite Reliability and Cronbach's Alpha which are considered ideal are > 0.7, and satisfactory with a value > 0.8, with a value limit of 0.7 to 0.9.

Table 1. Construct Reliability Test and Convergent Validity Test

	Cronbach's alpha	Composite Reliability	Average Variance Extracted (AVE)
KK	0.901	0.914	0.586
KO	0.908	0.912	0.548
KY	0.893	0.896	0.510

The next test after internal consistency or construct reliability is by using convergent validity which measures whether each indicator represents and underlies the latent variable through the Average Variance Extracted (AVE) test. If the minimum value of AVE is 0.5, it means that the latent variable can interpret half of each indicator and its convergent validity can be interpreted as good (Hair et al, 2017).

Table 2. *Discriminant validity - Forner-Larcker criterion*

	KK	KO	KY
KK	0.897		
KO	0.756	0.840	
KY	0.831	0.819	0.824

The next test is using discriminant validity - Forner-Larcker criterion. Based on the test results, it shows that the average variance extracted (AVE) square root value is greater than the correlation value, so it can be concluded that the discriminant validity test requirements have been met.

Structural Model (Inner Model)

After testing the outer model, the next first step is to test the inner model (structural model). This aims to test the research hypothesis. The first step taken was to test the Coefficient of Determination.

Table 3. Coefficient of Determination Test Results

	R-square	R-square adjusted
KY	0.776	0.772

Based on the results of the Coefficient of Determination test on the employee performance (KY) model, it shows an R-square value of 0.776, which means that the contribution of the independent variables to employee performance is 77.6% while the rest comes from variables outside the research.

Table 4. Path coefficients test results – Matrix

	KK	KO	KY
KK			0.494
KO			0.446
KY			

The second step in the structural model (Inner Model) is to look at the Path Coefficient value. This value is to see how strong the path relationship is in the structural model with a limit of 0 to 1, which means the exogenous latent variable has an influence on the model (Hair et.al., 2017). Based on the Path Coefficient test, we can see that all paths have values between 0 and 1, so it can be concluded that all paths have a positive influence.

Table 5. Path coefficients – T statistic, p value

	T statistic,	*p value*
KK → KY	6.843	0.000
KO → KY	6.099	0.000

The third step is to carry out a statistical T test (Bootstrapping) in the structural model. According to Hair et.al., (2017) In this test the level of significance is with a T statistic value > 1.97928 and uses 5% significance. Apart from the T statistic, p values are also used with the provisions of p value < 0.05, the level of significance of the path relationship is 5%, p value < 0.01, the level of significance is 1%. Based on the results of the t-statistic and p value tests, we can see that all relationship paths between variables show a significant influence and meet the requirements, so hypothesis Ha1 to hypothesis Ha2 are accepted.

Table 6. Goodness of Fit Test Results

	Goodness of Fit
NFI	0.602

The fourth step is testing the structural model, validating together whether the measurement model and structural model of the hypothesis are appropriate or fit. This test was carried out using Goodness of Fit, with interpreted values, namely small with a value of 0-0.25, moderate with a value of 0.25-0.36, and large with a value above 0.36. Based on the goodness of fit test results, a value of 0.602 was obtained, meaning that the measurement model and structural model in the hypothesis were appropriate or fit with a large value, namely 0.602.

CONCLUSION

The research results show that occupational health and safety have a significant positive effect on employee performance at PT AEI. Competence shows a significant positive influence on employee performance at PT AEI. Occupational health and safety together with competency is able to have a significant influence on employee performance at PT AEI, with a contribution of 77.6%.

REFERENCES

Awada, M., Becerik-Gerber, B., Liu, R., Seyedrezaei, M., Lu, Z., Xenakis, M., ... & Narayanan, S. (2023). Ten questions concerning the impact of environmental stress on office workers. *Building and Environment*, *229*, 109964.

Dietz, C., & Zacher, H. (2023). Reciprocal Effects of Sickness Presence, Job Satisfaction, and Health: A Six-Wave Longitudinal Study. *Occupational Health Science*, *7*(4), 647-680.

Ghozali, Imam. 2013. Aplikasi Analisis Multivariat dengan Program IBM SPSS. Edisi 7. Semarang: Penerbit Universitas Diponegoro.

Hair, J.F., Black, W.C., Babin, B.J. and Anderson, R.E. (2010) Multivariate Data Analysis. 7th Edition, Pearson, New York.

Karthick, S., Kermanshachi, S., Pamidimukkala, A., & Namian, M. (2023). A review of construction workforce health challenges and strategies in extreme weather conditions. *International journal of occupational safety and ergonomics*, *29*(2), 773-784.

Malhotra, R., Massoudi, M., & Jindal, R. (2023). Shifting from traditional engineering education towards competency-based approach: The most recommended approach-review. *Education and Information Technologies*, *28*(7), 9081-9111.

Mesmer-Magnus, J., Guidice, R., Andrews, M., Woolum, A., & Robertson, E. (2023). Implications of employees who work while commuting: A moderated mediation analysis. *Human Systems Management*, (Preprint), 1-16.

Mohsan, S. A. H., Othman, N. Q. H., Li, Y., Alsharif, M. H., & Khan, M. A. (2023). Unmanned aerial vehicles (UAVs): Practical aspects, applications, open challenges, security issues, and future trends. *Intelligent Service Robotics*, *16*(1), 109-137.

Mustard, C. A., & Yanar, B. (2023). Estimating the financial benefits of employers' occupational health and safety expenditures. *Safety science*, *159*, 106008.

Muzam, J. (2023). The challenges of modern economy on the competencies of knowledge workers. *Journal of the Knowledge Economy*, *14*(2), 1635-1671.

Susanto, S., & Halim, I. (2020). Pengaruh Human Relation Dan Lingkungan Kerja Terhadap Kinerja Karyawan Pada PT. Kompas Gramedia Cabang Karawaci. *Proceedings Universitas Pamulang*, *1*(1), 158-170.

Yang, J., Ye, G., Zhang, Z., Liu, X., & Liu, Y. (2023). Linking construction noise to worker safety behavior: The role of negative emotion and regulatory focus. *Safety science*, *162*, 106093.