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Occupational Safety and Health (K3), Work Environment and Competence on Employee Performance

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ABSTRACT
Research objectives (1) To determine the effect of occupational safety and health on employee performance; (2) To determine the effect of Work Environment on Employee Performance. (3) To determine the effect of Competence on Employee Performance. The type of research employed in this study is quantitative, utilizing primary data. The sample in this study was 60 respondents. The sampling technique used in this study was a survey method. Meanwhile, the analysis methods used in this study include data validity tests, data reliability tests, normality tests, multicollinearity tests, heteroscedasticity tests, multiple linear regression analyses, partial influence tests (t-tests), simultaneous influence tests (F-tests), and simultaneous determination tests (R^2) with the help of SPSS Version 25. The results of the study indicate that (1) Occupational Safety and Health have a positive and significant influence on Employee Performance at PT PLN (Persero) UP3 Kendari, and (2) Work Environment has a positive and significant influence on Employee Performance at PT PLN (Persero) UP3 Kendari. (3) Competence has a positive and significant influence on Employee Performance at PT PLN (Persero) UP3 Kendari

Keywords: Occupational Safety and Health (K3), Work Environment, Competence, Employee Performance.

I. Introduction

Human resources (HR) constitute a strategic asset that determines an organization's capacity to achieve long-term sustainability, operational excellence, and competitive advantage in an increasingly dynamic work environment (Jumady et al., 2021). The quality of human resources is therefore central to shaping organizational superiority, particularly as institutions navigate rapid technological developments, shifting market structures, and rising expectations from stakeholders. Within this context, performance evaluation—encompassing assessment, identification of high- and low-performing employees, and provision of constructive feedback—remains one of the most challenging yet essential components within human resource management systems (Cherian et al., 2021). Many organizations fail to implement performance evaluations systematically, resulting in inconsistent procedures, inaccurate assessments, and ineffective performance improvement strategies.

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Accurate appraisal of employee performance is crucial, as it contributes not only to organizational decision-making but also enhances employee satisfaction, motivation, and commitment (Salam, 2021). In addition, employee competence—which encompasses knowledge, skills, and professional capabilities—is increasingly viewed as an organizational asset that adds substantial value regardless of current performance levels (Al-Tit et al., 2022). Numerous organizations prioritize competence because it strongly influences innovation capacity and overall productivity. This perspective is supported by findings showing that the closer an individual's competence aligns with their job requirements, the higher their level of performance (Krisnandi & Saputra, 2021). Competence, as defined by Dooley et al. (2004), encompasses the combination of knowledge, skills, and understanding necessary to meet task expectations, and therefore plays a pivotal role in determining an organization's effectiveness.

In Indonesia, PT PLN (Persero), the state-owned electricity company, serves as one of the most strategically significant public enterprises, responsible for nationwide electricity generation, transmission, and distribution. By the end of 2023, PLN operated generation facilities with a total installed capacity of 72,976.30 MW. Additionally, the company achieved a customer satisfaction index of 98.02 percent—a reflection of the capability and professionalism of its workforce in delivering essential public services (PLN, 2023). PLN's commitment to building high-quality human resources is also demonstrated through a remarkable increase in employee training investments in 2023, amounting to IDR 937.4 billion, compared to IDR 529 billion in 2022. This substantial investment signals the organization's recognition that human resource development is integral to achieving its strategic goals. PLN's corporate values are rooted in the BUMN core value of "AKHLAK," which emphasizes integrity, professionalism, collaboration, innovation, and customer focus (PLN, 2023). These values guide internal behavior and external interactions, particularly in collaborative projects involving third-party contractors and private partners. As PLN frequently engages in large-scale infrastructure development—such as the construction of power plants and transmission networks—its employees frequently interact with external contractors, making organizational culture and professional conduct essential for fostering harmonized industrial relations.

At the operational level, PLN's Unit Pelaksana Pelayanan Pelanggan (UP3) plays a crucial role in customer service, distribution management, and field technical operations. PT PLN (Persero) UP3 Kendari, which oversees seven customer service units (ULP) across eight districts and one municipality, faces complex operational challenges due to its broad geographic coverage and intensive interaction with customers and stakeholders. However, the internal work environment within UP3 Kendari presents several issues, including stagnancy due to employee reluctance to relocate, unclear career progression, and overcrowded shared workspaces that negatively affect employee comfort and motivation. These conditions align with OECD's (2017) conceptualization of the work environment as a multidimensional construct encompassing physical conditions, social relations, job demands, organizational structure, and career prospects. A poor work environment can undermine employee well-being, safety, and performance (Foldspang et al., 2014). In contrast, supportive and healthy work environments are consistently linked to improved employee outcomes (Gomes et al., 2023). Despite this, developing and maintaining a positive work environment remains a significant challenge for many organizations (Kouzes & Posner, 2023).

Beyond the work environment, occupational safety and health (OSH/K3) practices play a crucial role in shaping employee performance. Effective OSH practices foster a sense of security and belonging, which enhances employees' concentration, motivation, and job performance (Sembe & Ayuo, 2017; Yenita, 2022). Indonesia has established comprehensive regulations governing OSH, such as Law No. 1/1970 and Government Regulation No. 50/2012, aligned with ISO 45001:2018. These frameworks underscore the importance of preventive measures, emergency planning, welfare provision, and systematic risk mitigation in ensuring safe and healthy workplaces. The electricity sector, including PLN, is highly vulnerable to work-related risks. Empirical evidence shows that 27 percent of work accidents at PLN are caused by non-compliance with Standard Operating Procedures (SOP). In comparison, 17 percent arise from failure to use Personal Protective Equipment (PPE) (PLN, 2021). These findings are consistent with the International Labour Organization (2018), which reports that approximately 80 percent of occupational accidents result from

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unsafe worker behavior. Although PLN UP3 Kendari implements various safety initiatives—including safety patrols, OSH training, BPJS insurance benefits, and the provision of protective equipment—accident risks remain high, especially in technical field operations such as network maintenance and emergency repairs.

Recognizing the urgency of improving its safety culture, PLN has collaborated with international consultants since 2022 to identify root causes of accidents and strengthen OSH governance across its distribution and operational units (PLN, 2022). This initiative aims to establish a sustainable zero-accident culture and enhance employee performance through safer and more structured operational practices. In parallel with OSH and work environment factors, employee competence remains an essential determinant of performance, particularly in public service organizations where service quality directly affects societal welfare. Previous studies emphasize the importance of competence in state-owned enterprises, which generally adapt more slowly to technological changes compared to private organizations (Prabowo et al., 2022). As society relies heavily on the technical expertise and responsiveness of PLN employees, ensuring employee competence is fundamental to maintaining public trust and service continuity.

Existing empirical studies—such as those by Quddus (2022), Islamiah (2022), and Manalu & Hia (2020)—have shown that OSH, work environment, and competence influence employee performance, both partially and simultaneously. However, research within the specific operational context of PLN, particularly at the UP3 level where technical risks and service obligations intersect, remains limited. This gap highlights the need for studies that examine these variables within high-risk, service-intensive environments such as PLN UP3 Kendari. Given these considerations, this study aims to analyze the effects of occupational safety and health (OSH), work environment, and competence on employee performance at PT PLN (Persero) UP3 Kendari. The findings are expected to strengthen the theoretical framework of employee performance in high-risk public service sectors and provide actionable insights for PLN in developing more effective human resource, safety, and competency enhancement strategies.

II. Literature Review and Hypothesis Development

2.1. Concept of Management

The term *"management" originates from the verb "to manage," which refers to the act of organizing, directing, regulating, or administering resources to achieve predetermined objectives*. Substantively, the notion of management encompasses a series of coordinated activities related to planning, organizing, directing, and controlling resources (Bachtiar, 2019). Hasibuan (2019) defines management as both a science and an art of effectively and efficiently regulating the utilization of human and non-human resources to achieve organizational objectives. Similarly, Handoko (2003) emphasizes that management involves working with individuals and groups to determine, interpret, and accomplish organizational goals by executing core functions such as planning, organizing, staffing, directing, leading, and controlling.

Terry's (2008) foundational view conceptualizes management as a universal set of activities undertaken by individuals who contribute their best efforts toward goals established through structured processes. This perspective emphasizes the importance of identifying what needs to be accomplished, determining how tasks should be completed, understanding the procedural implementation, and ensuring the effectiveness of managerial efforts. Consistent with this, Terry and Rue (2019) reiterate that management must integrate both knowledge and action, as managers are responsible for designing work, coordinating individuals, and ensuring the attainment of goals. Terry's widely recognized POAC model—Planning, Organizing, Actuating, and Controlling—provides a comprehensive framework for explaining managerial functions. Planning involves selecting and relating facts to forecast future conditions and determining necessary actions. Organizing refers to the assignment of tasks, grouping activities, and allocating authority and responsibility. Actuating involves motivating individuals to work cooperatively toward common goals. Controlling ensures that performance aligns with established standards and that corrective measures are implemented when deviations occur.

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Griffin reinforces this perspective by emphasizing that the effectiveness and efficiency of all management processes determine the extent to which organizational goals can be achieved. Accordingly, management must integrate human, material, and informational resources in a way that ensures timely and effective results. Collectively, these definitions indicate that management is both a systematic science and a practical art. It requires conceptual understanding, technical insight, interpersonal skill, and situational judgment. Management thus becomes a dynamic process through which organizations mobilize their resources to accomplish strategic and operational objectives.

2.2. Human Resource Management (HRM)

Human resources represent the most central element of any organization. Regardless of the nature or purpose of an institution, its success depends fundamentally on human capability, decision-making, and behavior. Therefore, the discipline of human resource management (HRM) is essential for ensuring that people are effectively governed, guided, and developed in accordance with organizational vision and goals. Mangkunegara (2016) describes HRM as a systematic process encompassing planning, organizing, coordinating, implementing, and controlling activities related to recruitment, development, compensation, integration, and separation of employees to achieve organizational objectives. Priansa (2014) similarly explains HRM as both a science and an art for efficiently and effectively regulating human and other organizational resources. These definitions underscore that HRM is inherently goal-oriented, seeking to enhance employee quality and optimize performance outcomes.

Hamali (2018) outlines four fundamental objectives of HRM: social, organizational, functional, and individual. The social objective centers on ensuring that organizations fulfill ethical and social responsibilities, often reflected through Corporate Social Responsibility (CSR) initiatives such as environmental programs, community development, and employee training. The organizational objective focuses on securing a productive and highly motivated workforce, enhancing effectiveness through employee competence and efficient resource utilization. The functional objective is to maintain HRM activities that align with organizational needs, ensuring that HR policies and programs operate effectively and efficiently. Ultimately, the individual objective underscores the importance of aligning personal aspirations with organizational objectives, emphasizing that employees will perform effectively only when their individual needs and goals are fulfilled. HRM thus functions as a strategic mechanism for harmonizing organizational goals with the capabilities and aspirations of the workforce. Its central role in shaping performance, motivation, and productivity makes HRM one of the most critical components in modern organizational management.

2.3. Organizational Behavior Theory

Organizational Behavior (OB) offers a comprehensive framework for understanding how individuals, groups, and structures influence behavior within organizational settings. Robbins and Judge (2013) define OB as the study of the impact of individuals, groups, and organizational structures on behaviors in the workplace, with the goal of leveraging such knowledge to improve organizational effectiveness. OB examines issues such as productivity, absenteeism, turnover, job satisfaction, organizational citizenship behavior, and workplace deviance. The OB model typically consists of three interconnected layers: inputs, processes, and outcomes. Inputs include variables such as personality, values, organizational structure, and culture. Processes occur at the individual level (e.g., emotions, perception, decision-making), the group level (e.g., communication, leadership, conflict, power), and the organizational level (e.g., HR practices, change management). Outcomes represent key performance indicators, including efficiency, team cohesion, employee satisfaction, and overall organizational effectiveness.

Dessler (2015) extends this understanding by asserting that HRM activities—including recruitment, training, compensation, safety, and labor relations—play a pivotal role in shaping the behavioral outcomes of employees. Hasibuan (2019) further notes that improving employee contributions is central to enhancing

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quality and productivity within organizations. Therefore, OB provides the theoretical foundation for analyzing how employees respond to workplace conditions, managerial practices, and organizational culture.

2.4. Theory of Planned Behavior (TPB)

Ajzen's Theory of Planned Behavior (TPB) is widely applied in behavioral studies to predict intentions and actions based on attitudes, subjective norms, and perceived behavioral control (Ariyani & Ayu, 2023). TPB assumes that individuals engage in deliberate and reasoned decision-making, and motivational and capability-related perceptions influence their behavior. Attitudes reflect individuals' evaluations of behavioral outcomes; subjective norms relate to social pressures and expectations; and perceived behavioral control concerns individuals' assessment of their capacity to perform the behavior. TPB has been extensively used to explain workplace behavior, motivation, safety compliance, and performance. It posits that behavioral intention is the strongest predictor of actual behavior, and personal beliefs, social expectations, and perceived control over the behavior shape that intention itself. Therefore, TPB is relevant to understanding employee safety behavior (K3), adherence to organizational regulations, and work performance.

2.5. Employee Performance

Employee performance refers to the level of success achieved by employees in completing tasks in accordance with assigned responsibilities. Wibowo (2017) conceptualizes performance as the work results closely linked to strategic organizational goals, customer satisfaction, and contributions to organizational success. Priansa (2017) similarly defines performance as the output produced by job functions or activities. Performance is not merely an individual trait but a measurable outcome reflecting the interaction of knowledge, motivation, discipline, work environment, and organizational support. Sutrisno (2016) identifies several factors influencing performance, including organizational effectiveness and efficiency, clarity of authority and responsibility, discipline, and employee initiative. Performance appraisal provides numerous benefits for organizations, including opportunities for improvement, compensation adjustments, training needs analysis, fairness in treatment, managerial evaluation, and enhancement of HRM functions (Priansa, 2017). These mechanisms enable organizations to identify their strengths, address weaknesses, and design targeted interventions to enhance employee and organizational performance.

2.6. Occupational Safety and Health (OSH/K3)

Occupational Safety and Health (OSH), or *Keselamatan dan Kesehatan Kerja (K3)*, is defined in Government Regulation No. 50/2012 as all activities designed to ensure the protection and well-being of workers by preventing workplace accidents and occupational diseases. OSH aims to create safe and healthy workplaces, prevent injuries, minimize hazards, and ensure operational continuity. In industrial sectors—especially high-risk environments such as electricity distribution—OSH is vital for preventing accidents, managing technical risks, and protecting workers from hazardous exposures (Boschman et al., 2017). The implementation of OSH is further strengthened by national regulations, such as Law No. 1/1970 and Law No. 13/2003, as well as various ministerial decrees aligned with the ISO 45001 standards. OSH is also a strategic aspect of global competitiveness. International expectations regarding green productivity, environmental sustainability, and risk management underscore the growing importance of integrating OSH practices into organizational operations.

2.7. Work Environment

The work environment encompasses all external and internal factors that influence employee behavior, motivation, and performance. A conducive environment supports comfort, health, safety, and optimal task execution. Afandi (2018) notes that the work environment encompasses both physical elements,

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such as air circulation, lighting, noise, and workspace arrangement, as well as psychological elements, including workload, supervision quality, social relations, and conflict management. A positive work environment enhances motivation, reduces stress, and fosters teamwork, whereas a poor environment can lead to frustration, conflict, absenteeism, and decreased productivity. Sedarmayanti (Putra, 2019) describes the work environment as the totality of tools, materials, conditions, and organizational arrangements that employees encounter during their work.

2.8. Competence

Competence refers to an individual's knowledge, skills, abilities, and behavioral attributes that directly influence work performance. Kompetensi is fundamental to employee effectiveness because it determines the extent to which an individual can perform job tasks successfully (Arief & Nisak, 2022). Competence embodies a combination of technical expertise, experience, personal characteristics, and professional values. According to Indonesian Law No. 13/2003, competence encompasses knowledge, skills, and work attitudes that align with occupational standards. Competence is a strategic asset that enables employees to fulfill job expectations, meet organizational targets, and demonstrate integrity and reliability (Rohmat, 2020). Competency types are broadly divided into threshold competencies (basic minimum requirements) and differentiating competencies (attributes distinguishing high performers from average performers) (Girniawan et al., 2019). Competence is influenced by various factors, including beliefs, values, experience, personality, intellectual ability, organizational culture, emotional state, and motivation (Aisyah et al., 2021).

Based on the theoretical review above, the hypotheses proposed in this study are as follows:

H1: Occupational Safety and Health (OSH/K3) has a partial, positive, and significant effect on Employee Performance.
H2: The work environment has a partial, positive, and significant effect on Employee Performance.
H3: Competence has a partial, positive, and significant effect on Employee Performance.
H4: Occupational Safety and Health (OSH/K3), Work Environment, and Competence have a simultaneous, positive, and significant effect on Employee Performance.

III. Research Method

This study employs a quantitative research approach grounded in positivist philosophy, which examines relationships among variables using numerical data and statistical procedures (Babbie, 2016; Cooper & Schindler, 2014; Sugiyono, 2022). The research was conducted at PT PLN (Persero) UP3 Kendari over a period of two months (January–February 2025). The population consisted of all 60 employees at PT PLN UP3 Kendari. Since the population size was relatively small, a census technique (saturated sampling) was employed. Thus, the entire population served as the sample, with respondents selected based on accessibility and willingness to participate. Data were obtained through primary sources—namely, structured questionnaires measured using a five-point Likert scale—and supported by interviews with administrative officers to obtain contextual information. Secondary data, such as documents, reports, books, and scientific literature, were also used to strengthen conceptual understanding and validate research.

Two types of data were collected: qualitative data from interviews and organizational documents, and quantitative data derived from questionnaire responses, which were scored numerically. The research instrument consisted of closed-ended items designed to measure Occupational Safety and Health (K3), Work Environment, Competence, and Employee Performance. Before hypothesis testing, the instrument underwent validity and reliability assessment using Pearson's correlation and Cronbach's Alpha to ensure accuracy and internal consistency. Data collection techniques included interviews, questionnaires, and document analysis,

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ensuring comprehensive triangulation of information regarding the work environment, safety culture, and employee competence within the organization.

Data analysis was performed using SPSS 25.0, employing both descriptive and inferential statistical procedures. Descriptive analysis summarized the respondents' characteristics and variable distributions, while classical assumption tests (normality, multicollinearity, and heteroskedasticity) ensured the feasibility of the regression model. Hypothesis testing was conducted using multiple linear regression, accompanied by partial significance tests (t-tests), simultaneous significance tests (F-tests), and the coefficient of determination (R^2). The regression model examined the effects of K3, Work Environment, and Competence—both individually and collectively—on Employee Performance at PT PLN (Persero) UP3 Kendari.

IV. Results and Discussion

4.1. Research Result

a. Classical Assumption Test

1) Normality Test

Table 1. Normality Test Using the Kolmogorov-Smirnov Test Method

One-Sample Kolmogorov-Smirnov Test					
		Occupational Safety and Health (X1)	Work Environment (X2)	Competence (X3)	Employee Performance (Y)
N		60	60	60	60
Normal Parametersa,b	Mean	32,0333	18,8500	15,5667	20.67
	Standard Deviation	8,45319	5,16121	4.01002	4,520
Most Extreme Differences	Absolute	0.097	0.107	0.099	0.080
	Positive	0.097	0.066	0.073	0.041
	Negative	-0.093	-0.107	-0.099	-0.080
Test Statistics		0.097	0.107	0.099	0.080
Asymp. Sig. (2-tailed)		,200c,d	,082c	,200c,d	,200c,d

From the table above, it can be seen that the Asymp Sig value from the results of the normality test using the Kolmogorov-Smirnov test method is 0.200 for the Occupational Safety and Health variable (X1), 0.82 for the Work Environment variable (X2), 0.200 for the Competence variable (X3) and 0.200 also for the Employee Performance variable (Y), meaning it is greater than 0.05. It can be concluded that the normality test in this study, using the Kolmogorov-Smirnov test method, indicates that the data are typically distributed.

2) Multicollinearity Test

Table 2. Multicollinearity Test Results

No	Model	Tolerance	VIF	Information
1	Occupational Safety and Health (X1)	0.544	1,837	Not occur Multicollinearity
2	Work Environment (X2)	0.550	1,820	Not occur Multicollinearity
3	Competence (X3)	0.566	1,766	Not occur Multicollinearity

Based on the table of variance implation factor (VIF) values on the Occupational Safety and Health (X1), Work Environment (X2) and Competence (X3) variables, they are between 1-10, namely with a value of 1.837 on the Occupational Safety and Health (X1) variable, a value of 1.820 on the Work Environment (X2) variable, a value of 7.766 on the Competence (X3) variable and the tolerance value of the Occupational Safety

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and Health (X1), Work Environment (X2) and Competence (X3) variables > 0.10 where the value of 0.544 on the Occupational Safety and Health (X1) variable, the value of 0.550 on the Work Environment (X2) variable and the value of 0.566 on the Competence (X3) variable, then from the data above it can be concluded that there is no multicollinearity.

3) Heteroscedasticity Test

This heteroscedasticity assumption test aims to determine whether there is inequality in the variance of the residuals between one observation and another in a regression model. The basis for decision-making in this scatterplot method is: if a specific pattern, such as existing points (points) form a specific regular pattern, then heteroscedasticity occurs. If there is no clear pattern and the points are spread above and below the y-axis at zero, then heteroscedasticity does not occur.

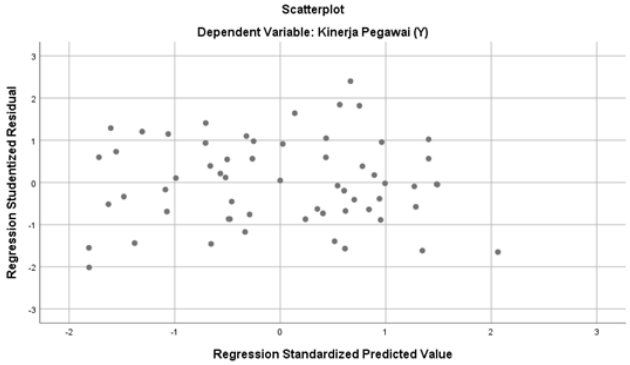

Figure 1. Heteroscedasticity Test Using the Scatterplot Method

The figure above shows that the points are spread randomly, do not form a clear/regular pattern, and are spread both above and below the number 0 on the Y-axis. Thus, there is no heteroscedasticity in the regression model.

b. Multiple Linear Regression Analysis Test

This multiple linear regression is used to test and determine the influence of Occupational Safety and Health (X1), Work Environment (X2) and Competence (X3) on Employee Performance (Y) which later when the results of the multiple linear regression analysis have been seen can be continued with hypothesis testing about the partial and simultaneous influence of independent variables on the dependent variable.

Table 3. Results of Multiple Linear Regression Testing

Coefficientsa						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3,334	1,304		2,556	0.013
	Occupational Safety and Health (X1)	0.279	0.046	0.523	6,055	0,000
	Work Environment (X2)	0.195	0.075	0.223	2,597	0.012
	Competence (X3)	0.302	0.095	0.268	3,166	0.003

Based on the results of the IBM SPSS Statistics 25 for Windows output in Table 22 above, the multiple linear regression equation can be formulated as follows:

$$Y = 3.334 + 0.279X1 + 0.195X2 + 0.302X3$$

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Information:

Y = Employee Performance
X1 = Occupational Safety and Health
X2 = Work Environment
X3 = Competence
β1, β2, β3 = Regression coefficient

The equation above shows that all independent variables of Occupational Safety and Health (X1), Work Environment (X2), and Competence (X3) have positive coefficients, indicating that each variable has a unidirectional influence on the Employee Performance variable (Y). The results of the research analysis in the form of the multiple linear regression equation above can be interpreted as follows:

1) The constant value is 3.334, so this can be interpreted that if the Occupational Safety and Health variables (X1), Work Environment (X2), and Competence (X3) are constant (do not change), then the value of Employee Performance (Y) is 3.334.
2) The Regression Coefficient X1 is 0.279, so this can be interpreted that the Occupational Safety and Health variable (X1) affects Employee Performance by 0.279, meaning that if every increase in the Occupational Safety and Health variable (X1) by one point, it will increase Employee Performance (Y) by 0.279 assuming other variables remain constant, and vice versa, the lower the Occupational Safety and Health (X1) provided by the company, the lower the Employee Performance (Y).
3) The Regression Coefficient X2 is 0.195, so this can be interpreted that the Work Environment variable (X2) affects Employee Performance (Y) by 0.195, meaning that if every increase in the Work Environment variable (X2) by one point, it will increase Employee Performance (Y) by 0.195 assuming other variables remain constant, and vice versa, the lower the Work Environment (X2) provided by the company, the lower the Employee Performance (Y).
4) The Regression Coefficient X3 is 0.302, so this can be interpreted that the Competence variable (X3) affects Employee Performance (Y) by 0.302, meaning that if every increase in the Competence variable (X3) by one point, it will increase Employee Performance (Y) by 0.302 assuming the other variables remain constant, and vice versa, the lower the Competence (X3) provided by the company, the lower the Employee Performance (Y).

c. Hypothesis Testing

1) Partial Significance Test (t-Test)

The purpose of the partial regression coefficient hypothesis test (t-test) or the influence of each is to determine whether the independent variable (X), in this case, the occupational safety and health (K3) variable, the work environment, and competence, individually influence the dependent variable (Y), namely the employee performance variable. The test results can be seen in the test results table as follows:

Table 4. Partial Test Results (t-Test)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3,334	1,304		2,556	0.013
	Occupational Safety and Health (X1)	0.279	0.046	0.523	6,055	0,000
	Work Environment (X2)	0.195	0.075	0.223	2,597	0.012
	Competence (X3)	0.302	0.095	0.268	3,166	0.003

Based on the table above, it can be seen that:

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a) The Influence of Occupational Safety and Health (X1) on Employee Performance (Y)

The t-value of the occupational safety and health variable (X1) is 6.055, so H0 is rejected, and Ha is accepted because the t-value exceeds the t-table value (6.055 > 2.003). This indicates that the occupational safety and health variable (X1) has a partial, positive, and significant influence on employee performance (Y). Thus, Hypothesis 1, which states that occupational safety and health (X1) has a partial, positive, and significant influence on employee performance (Y), is accepted.

b) The Influence of Work Environment (X2) on Employee Performance (Y)

The t-value of the work environment variable (X2) is 2.597, so H0 is rejected, and Ha is accepted because the t-value > t-table (2.597 > 2.003). This indicates that the work environment variable (X2) has a partial, positive, and significant influence on employee performance (Y). Thus, Hypothesis 2, which states that the work environment variable (X2) has a partial, positive, and significant influence on employee performance (Y), is accepted.

c) The Influence of Competence (X3) on Employee Performance (Y)

The t-value of the competency variable (X3) is 3.166, so H0 is rejected, and Ha is accepted because the t-value exceeds the t-table value (3.166 > 2.003). This indicates that the competency variable (X3) has a partial, positive, and significant influence on employee performance (Y). Thus, Hypothesis 3, which states that the work environment variable (X2) has a partial, positive, and significant influence on employee performance (Y), is accepted.

2) Simultaneous Significance Test (F Test)

The F-test is a simultaneous test to determine whether the occupational safety and health variables (X1), work environment (X2), and competence (X3) collectively have a significant influence on employee performance (Y). The F-test is conducted by comparing the calculated F-value with the F-table value. From the analysis results, the output results from IBM SPSS Statistics 25 for Windows are obtained in the following table:

Table 5. Simultaneous Test Results (F Test)

ANOVA						
Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1	Regression	931,729	3	310,576	63,567	,000b
	Residual	273,604	56	4,886		
	Total	1205,333	59			

Based on the table above, the F-count value is 63.567, and the F-table value is 2.76. So H0 is rejected and Ha is accepted because F-count > F-table with a significant value of 63.567 > 2.76 at α = 5%, meaning that together the occupational safety and health variables (X1), work environment (X2) and competence (X3) have a simultaneous, positive and significant effect on employee performance (Y) at PT PLN (Persero) UP3 Kendari. Thus, Hypothesis 4, which states that the variables of occupational safety and health (X1), work environment (X2), and competence (X3) have a simultaneous, positive, and significant influence on employee performance (Y), is accepted.

3) Correlation Coefficient (R) Test

The correlation coefficient is used to determine the strength or weakness of the relationship between the variables being analyzed. The nature of the correlation will increase the direction of the correlation. The correlation results in this study can be seen in the following table:

Table 6. Results of the Correlation Coefficient (R) Test

Model Summary				
Model	**R**	**R Square**	**AdjustedR Square**	**Standard Error of the Estimate**
1	,879a	0.773	0.761	2,210

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a. Predictors: (Constant), Competence (X3), Occupational Safety and Health (X1), Work Environment (X2)

Based on the table above, it can be seen that the correlation coefficient (R) test result is 0.879. This indicates that the relationship between the independent variables is powerful, as it falls within the correlation interval of 0.80–1.00.

4) Coefficient of Determination Test (R2)

The coefficient of determination is used to determine the extent to which the occupational safety and health variables (X1), work environment (X2), and competence (X3) contribute to the employee performance variable (Y). The R Square value is said to be good if it is above 0.5 or 0-1, as in the following table:

Table 7. Test Results: Coefficient of Determination (R2)

Model Summary				
Model	**R**	**R Square**	**AdjustedR Square**	**Standard Error of the Estimate**
1	,879a	0.773	0.761	2,210
a. Predictors: (Constant), Competence (X3), Occupational Safety and Health (X1), Work Environment (X2)				

The results of the analysis of factors influencing employee performance indicate that the coefficient of determination (R^2) is 0.761. This means that the independent variables, namely occupational safety and health (X1), work environment (X2), and competence (X3), have a joint contribution of 0.761 or interpreted as a percentage is equal to76% of the dependent variable, namely employee performance (Y), while the remaining 24% (100% - 76% = 24%) is explained by other factors outside of this research.

4.2. Discussion

Based on the results of statistical tests, it can be clearly seen that partially (individually) all independent variables have a positive and significant effect on the dependent variable, as well as simultaneously (together) the independent variables affect the dependent variable. The influence given by both independent variables is positive, meaning that the higher the occupational safety and health (X1), work environment (X2), and competence (X3) provided by the company, the higher the employee performance (Y) produced. These results are in accordance with the proposed hypothesis. The results of this study are consistent with those of previous studies. The explanation of each variable's influence is as follows:

a. The Influence of Occupational Safety and Health (K3) on Employee Performance

From the results of the research conducted by the author, in testing the first hypothesis, which states that Occupational Safety and Health (X1) has a partial, positive, and significant effect on Employee Performance (Y), is accepted, or the Occupational Safety and Health variable (X1) partially has a significant effect on Employee Performance (Y). This is supported by obtaining a significant p-value of 0.000 < 0.05, meaning that H0 is rejected and Ha is accepted, or the Occupational Safety and Health variable (X1) has a partial, positive, and significant effect on Employee Performance (Y) at PT PLN (Persero) UP3 Kendari. Based on the results of the questionnaire distribution, it was found that the occupational safety and health indicator that received the highest score was the indicator of the cause of work accidents in unsafe working conditions. The company has paid attention to the condition of its workplace, ensuring that all employees work in safe and secure conditions before they begin their tasks. The author assumes that there is a connection between the causes of work accidents, because the company pays close attention to safe workplace conditions in the work process at the workplace, this can be seen because the indicator of unsafe working conditions is the cause of work accidents getting the highest score when compared to other indicators, namely with a total score of 274 and as many as 39 respondents answered strongly agree.

The occupational safety and health indicator that received the lowest score from respondents' perceptions fell into the Occupational Health category, specifically stress. While companies still need to address health and lifestyle factors in occupational safety and health, there are many benefits to considering

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the causes of stress, including ensuring adequate rest, maintaining a healthy diet, maintaining a balanced lifestyle, and maintaining mental health, all of which can help companies create a safer and more comfortable workplace. Occupational safety and health (OSH) refers to the effort to ensure the integrity and well-being of both the physical and mental health of workers, in particular, and humans in general. The results of their work and culture to achieve a just and prosperous society, according to Occupational Safety and Health (K3), are crucial and require serious attention. Indonesia must also take occupational safety and health seriously, as ensuring occupational safety and health (K3) can foster employee morale. The results of this study align with those of Renanda Galuh Vitaloka (2025), who stated that occupational safety and health (OSH) significantly impacts employee performance at PT Surya Toto Indonesia Tbk, South Tangerang. They also align with those of Mochamad Syahrir Ramdani (2023), who found that occupational safety and health (OSH) significantly impacts employee performance at PT PLN (Persero) Malang Area.

b. The Influence of Work Environment on Employee Performance

From the results of the research conducted by the author, the second hypothesis test, which states that the Work Environment (X2) has a partial, positive, and significant effect on Employee Performance (Y), is accepted, or the Work Environment variable (X2) partially has a positive and significant effect on Employee Performance (Y). This is supported by obtaining a significant p-value of 0.012 < 0.05, meaning that H0 is rejected and Ha is accepted, or the Work Environment variable (X2) has a partial, positive, and significant effect on Employee Performance (Y) at PT PLN (Persero) UP3 Kendari. Based on the results of this study, the most influential indicator for the work environment, specifically the facilities indicator, was "the company provides a comfortable workspace to support work activities," with a total score of 266, with 35 respondents strongly agreeing. Therefore, it can be concluded that a comfortable and safe workspace allows every employee to focus more on their work.

The work environment indicator with the lowest score according to respondents' perceptions was lighting in the workspace. Suboptimal lighting can cause eyestrain, reduce concentration, and increase the risk of workplace accidents due to poor visibility. Therefore, companies are strongly encouraged to make more extensive improvements or maintenance to the quality of the work environment, both physical and non-physical, to enhance employee comfort and productivity. The work environment refers to the atmosphere or conditions surrounding the workplace, encompassing the space, layout, facilities, infrastructure, and working relationships with coworkers. Organizations must be able to monitor conditions within their organizational environment, both inside and outside the workplace, so that employees can work smoothly, safely, and comfortably.(Kasmir 2022:192). This finding aligns with and supports the research conducted by Muhammad Fauzi Rahman (2023) on the Influence of Work Environment and Work Discipline on Employee Performance (Study at the Hajj Hospital in Makassar City), which concluded that the work environment has a positive and significant impact on employee performance. The better the work environment, the better the employee's performance level. This is because employees carry out activities every day. A conducive work environment provides a sense of security, enabling employees to work optimally.

c. The Influence of Competence on Employee Performance

Based on the research results, the author accepts the first hypothesis, which states that Competence (X3) has a partial, positive, and significant effect on Employee Performance (Y). This means that the Competence variable (X3) partially has a significant effect on Employee Performance (Y). This is supported by a significant value of 0.003 < 0.05, meaning that H0 is rejected and Ha is accepted, indicating that the Competence variable (X3) has a partial, positive, and significant effect on Employee Performance (Y) at PT PLN (Persero) UP3 Kendari. This study involved 60 respondents who were employees of PT PLN (Persero) UP3 Kendari, aiming to measure the level of employee competency based on their perceptions. Based on the results of the testing and data analysis conducted, it is evident that the competency variables measured in this study fall into the good category, as per the respondents' views. Based on the questionnaire results, the Competency indicator with the highest score is the interest indicator. The company has paid attention to this aspect, as evidenced by a total score of 261, where 31 respondents answered 'strongly agree'. At the same time, the lowest indicator is seen in the ability indicator for this competency variable.

This indicates that employees at PT PLN (Persero) UP3 Kendari possess the necessary competencies to fulfill their duties and responsibilities. These competencies encompass aspects of knowledge, skills, and the

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ability to complete work effectively and efficiently. Thus, overall, it can be concluded that employees at PT PLN (Persero) UP3 Kendari have a good level of competency, which can support improved company performance and productivity in achieving its operational goals. Competence is the ability to carry out or perform a job or task effectively, based on the skills and knowledge required, and supported by the work attitude necessary for the job. Thus, competence indicates skills or knowledge that are characterized by professionalism in a particular field as something that is most important, as superior. This finding aligns with and supports the research conducted by Muhammad Ainul Az (2023), entitled "The Influence of Competence, Motivation, and Work Discipline on Employee Performance at the Faculty of Industrial Technology, Muslim University of Indonesia." The results of this research analysis demonstrate that employee competency has a positive and significant impact on employee performance at the Faculty of Industrial Technology, Universitas Islam Negeri Indonesia.

d. The Influence of Occupational Safety and Health (K3), Work Environment and Competence on Employee Performance

From the results of the research conducted by the author, there is an influence of the variables of Occupational Safety and Health (X1), Work Environment (X2), and Competence (X3) on Employee Performance (Y), resulting in a probability value of sig 0.000 smaller than α = 0.05 (0.000 <0.05). This means that the null hypothesis (H0) is rejected and Ha is accepted. It can also be concluded that Occupational Safety and Health (K3), work environment, and work competence simultaneously provide a positive and significant influence on improving employee performance at PT PLN (Persero) UP3 Kendari. This influence arises because these three factors play a crucial role in creating safer, more comfortable, and conducive working conditions for employees as they carry out their duties and responsibilities. The optimal implementation of occupational safety and health (K3) can minimize the risk of work accidents and increase employees' sense of security, allowing them to work more focused and efficiently. In addition, a good work environment, encompassing physical, social, and psychological aspects, also contributes to enhancing employee welfare, which ultimately has a positive impact on productivity and work motivation. Work competency, which encompasses knowledge, skills, and individual abilities in completing tasks, is a crucial factor in ensuring employees can perform their jobs effectively and achieve optimal results. Thus, the positive impacts of occupational safety and health (OHS), a supportive work environment, and adequate work competency demonstrate that these three variables are fundamental elements in sustainably improving the quality and performance of employees at PT PLN (Persero) UP3 Kendari.

Therefore, it is concluded that with the increase in Occupational Safety and Health (K3), Work Environment, and Competence, the opportunity for good Employee Performance will be greater. The results above indicate that the fourth hypothesis, which posits that the variables of Occupational Safety and Health (X1), Work Environment (X2), and Competence (X3) have a positive and significant effect on Employee Performance (Y) when considered simultaneously, is accepted. This is supported by previous research by Titing Roharto (2017), entitled "The Influence of Occupational Safety and Health (K3), Work Environment, and Training on Performance at PT Pelabuhan Indonesia II (Persero), Jakarta" (Case Study on the Kalibaru TPK Development Dredging Project). The results of the analysis, based on the test results obtained, indicate that the variables of occupational safety and health, work environment, and training, together have a significant effect on the performance of PT Pelabuhan Indonesia II (Persero) in the Kalibaru TPK Dredging Project. In this study, some things need to be considered as part of the research weaknesses, namely the variables studied, namely occupational safety and health (X1), work environment (X2), and competence (X3), have not been able to explain all about employee performance (Y), so it is necessary to explore other variables that can influence. This can be seen in the R-squared value, which is 0.76 or 76%, indicating that there are still 24% of other factors that were not studied in this study, such as job training, work motivation, leadership style, and so on.

V. Conclusion

This study demonstrates that Occupational Safety and Health (K3), Work Environment, and Competence each have a positive and significant effect on Employee Performance at PT PLN (Persero) UP3 Kendari, both individually and collectively. The findings show that employees perform substantially better

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when the company ensures strong safety practices, provides a supportive and comfortable work environment, and invests in competence development. Together, these three variables form an integrated foundation that strengthens employees' productivity, commitment, and overall performance. The empirical results confirm that performance improvement at PT PLN (Persero) UP3 Kendari is not driven by a single factor, but rather by the synergy between a safe workplace, conducive environmental conditions, and strong employee competencies.

Theoretically, the results reinforce established concepts in human resource management and organizational behavior, particularly the idea that employee performance is shaped by organizational support systems—such as safety culture, work climate, and capability enhancement. The findings also support the Theory of Planned Behavior, as their perceived control and workplace conditions influence employees' performance behavior. From a managerial perspective, the study highlights the need for PLN to strengthen its K3 implementation, maintain a psychologically and physically supportive work environment, and provide structured competency development programs, including certification and continuous training. Managers should integrate these three areas into a unified HR strategy in order to achieve long-term performance sustainability across operational units.

This study has several limitations. First, the sample is limited to 60 employees within a single UP3 unit, which may restrict the generalizability of the findings to other PLN units or different organizational contexts. Second, the study relies on self-reported questionnaire data, which may be influenced by response bias. Third, the analysis focuses only on three predictor variables, while other influential factors—such as leadership style, workload, motivation, job satisfaction, or organizational culture—were not examined. Future research should expand the scope by including multiple PLN units, employing mixed-method or longitudinal designs, and incorporating additional organizational variables to produce a more comprehensive model of employee performance in high-risk and service-oriented industries.

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