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The Influence of Job Training and Work Environment on Employee Performance: The Mediating Role of Work Productivity And The Moderating Role of Workload At Pt. Data Link Group

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Abstract

The purpose of this study is to examine the influence of job training and work environment on employee performance: the mediating role of work productivity and the moderating role of workload at PT. Data Link Group. This research adopts an individual-level analysis, with the population and sample comprising 130 employees of PT Data Link Group. The data were analyzed using the Partial Least Squares Structural Equation Modeling (PLS-SEM) technique. The results reveal that job training, work environment, work productivity, and employee performance at PT Data Link Group are generally well-implemented. Job training has a positive and significant effect on employee performance. Similarly, the work environment also demonstrates a positive and significant effect on employee performance. Moreover, job training and work environment significantly enhance employee productivity. In turn, work productivity has a positive and significant influence on employee performance. The findings further indicate that job training significantly affects employee performance through the mediation of work productivity. However, workload does not significantly moderate the relationship between work productivity and employee performance.

Keywords: Job Training, Work Environment, Work Productivity, Workload, Employee Performance

Introduction

Despite the advancement of modern technologies, coal remains a critical energy resource globally, particularly in Indonesia. A consistent and secure energy supply is essential to support the country's diverse industrial sectors. In this context, PT Data Link Group has positioned itself as a key player in the mining support services sector, specializing in coal transportation, electricity network development, internet access points, and hauling road construction. Operating primarily in the coal hauling industry in Meulaboh, West Aceh, PT Data Link Group is committed to meeting its contractual delivery target of 20,000 metric tons (MT) per period. However, the company has recently experienced difficulties in achieving this target. These challenges are largely attributed to frequent mechanical failures of transportation equipment and suboptimal productivity among field workers.

PT Data Link Group, a company engaged in the provision of heavy equipment and coal transportation (coal hauling) in the West Aceh mining sector, is currently facing significant challenges amid rapidly evolving industry dynamics. Effective human resource management and a supportive work environment are essential to fostering optimal employee performance. One of the recurring issues faced by PT Data Link Group is the high turnover rate among operational employees in the coal hauling division. This condition disrupts operational stability and leads to increased costs associated with the recruitment and training of new personnel. Additionally, employee work productivity in the coal hauling division tends to fluctuate and has shown a declining trend during certain periods. The level of employee productivity at PT Data Link Group is presented in Table 1.

Table 1. Employee Work Productivity Level of PT. Data Link Group in 2023

No	Aspect	Target	2023	2024
1	Quantity and quality of work output	100%	86.77%	83.28%
2	Time efficiency	100%	95.39%	94.47%
3	Attendance and punctuality	100%	98.72%	98.91%

4	Employee commitment and satisfaction	100%	74.36%	71.19%
5	Innovation and creativity	100%	85.49%	91.58%

Source: PT. Data Link Group (2025)

Based on the performance reports of PT Data Link Group for 2023 and 2024, employee productivity has shown improvement only in the areas of attendance, punctuality, and innovation and creativity. However, other key aspects such as the quantity and quality of work output, time efficiency, commitment, and employee satisfaction have experienced a decline. Several factors are suspected to contribute to this decrease in productivity, including excessive workloads, low motivation, and an unconducive work environment. PT Data Link Group has received frequent complaints from employees regarding working conditions, such as unsafe field environments, extended working hours, and inadequate supporting facilities at work sites. These conditions negatively impact employee job satisfaction and overall performance. In particular, an imbalanced workload among employees especially in the operational division has led to increased job dissatisfaction and work-related stress. These issues, in turn, can significantly affect employee performance and result in a decline in the quality of their work.

Based on preliminary observations conducted through interviews with employees in the Human Resources Department at PT Data Link Group, one of the primary factors contributing to low employee productivity is the limited provision of job training for drivers and other operational staff. For instance, training related to occupational safety such as driving safety procedures, accident prevention, proper use of personal protective equipment, and first aid has not been adequately implemented. This lack of training has resulted in employees possessing limited technical skills to address field-related issues, which in turn disrupts workflow and reduces operational efficiency. Moreover, an unsupportive work environment has also been identified as a significant factor contributing to decreased employee motivation, ultimately affecting overall productivity across the organization.

In addition, high workloads that are not supported by effective work management have resulted in significant physical and mental stress among employees. This condition adversely affects employee well-being, increases the likelihood of errors, and prolongs task completion times. The accumulation of these issues hinders the company's ability to meet its contractual targets, thereby impeding overall organizational performance.

The importance of employee performance to an organization cannot be overstated, as strong employee performance is closely linked to the organization's success and long-term growth. When employees perform well, tasks and projects are completed efficiently, leading to increased organizational productivity. Operational efficiency allows more tasks to be accomplished using fewer resources, thereby reducing overall operational costs and enhancing organizational effectiveness. Several factors influence employee performance, including job training, work environment, motivation, leadership, and workload. Among these, job training and the work environment are particularly critical, as they directly shape employees' skills, attitudes, and ability to carry out their responsibilities effectively (Nguyen & Dao, 2023).

Effective training and work practices play a vital role in enhancing employee performance through various mechanisms, including proper recruitment, continuous training and development, performance management, equitable compensation, and the creation of a supportive and positive work environment. By emphasizing these elements, human resource management (HRM) can significantly contribute to improving organizational performance and achieving strategic objectives. Previous studies have supported this view. For instance, research conducted by Nguyen & Dao, (2023) found that job training has a positive and significant impact on employee performance. Their findings highlight the importance of structured and well-implemented training programs in equipping employees with the necessary skills and competencies to perform effectively.

In addition to training, the work environment also plays a significant role in influencing employee performance (Ingsih et al., 2021). Providing employees with adequate tools and technology enables them to work more efficiently and effectively, which positively impacts their overall performance. A strong technological infrastructure allows employees to complete tasks accurately and in a timely manner. A positive work environment is recognized as one of the key factors in enhancing employee performance (Zhenjing et al., 2022). This includes the creation of favorable physical conditions, the cultivation of harmonious social relationships, the provision of psychological support, the implementation of effective management practices, and the availability of adequate facilities and modern technology.

These elements collectively contribute to a conducive atmosphere that motivates employees and supports optimal performance.

Work productivity has a direct influence on employee performance, as it reflects how efficiently and effectively individuals complete their assigned tasks. High levels of productivity have a positive and significant impact on job performance by enhancing efficiency, effectiveness, motivation, and job satisfaction. When productivity is optimized, employees are more likely to consistently deliver high-quality results (Nguyen & Yandi, 2020). Work productivity refers to the efficiency and effectiveness with which tasks are completed within an organization or by an individual. It is commonly measured by comparing output (work results) with input (resources such as time, labor, and materials). Productivity is critical for organizations because it directly impacts both operational performance and strategic outcomes. High productivity enables companies to minimize the time and resources required to produce goods and services. Productive employees are not only more capable of delivering high-quality outputs but also of driving innovation thus contributing to the company's competitive advantage. Efficient use of resources, as reflected in high productivity, is essential for ensuring long-term organizational sustainability (Tleuken et al., 2022).

Job training has a significant impact on work productivity (Al-aloosy et al., 2024). It is a strategic function within an organization that focuses on the recruitment, development, and management of human resources. The primary objective of training is to enhance employees' skills and competencies to ensure that they are well-equipped to perform their tasks effectively. Effective training programs help organizations recruit individuals with the appropriate knowledge, skills, and abilities. These employees are more likely to contribute directly to increased productivity. Through the use of structured selection methods such as skills assessments, competency-based interviews, and thorough background checks organizations can ensure that the individuals hired are well-suited to both job requirements and organizational culture. Furthermore, continuous training and development programs are essential to maintaining and improving employee competencies. Well-trained employees are more capable of completing tasks efficiently, adapting to technological changes, and contributing to organizational goals ultimately leading to higher levels of productivity.

The work environment is closely related to work productivity (Tleuken et al., 2022). It encompasses all the physical, social, and psychological conditions in which employees carry out their tasks. These aspects significantly influence employee well-being, performance, and productivity. A positive and supportive work environment not only enhances employee satisfaction and motivation but also contributes to improved performance and organizational success.

Creating and maintaining a conducive work environment involves several key elements: ensuring favorable physical conditions, fostering harmonious social interactions, providing adequate psychological support, implementing effective management practices, and equipping the workplace with appropriate facilities and technologies. When these elements are in place, employees are more likely to work productively and efficiently, which directly supports the organization's sustainability and long-term growth.

Literature Review

Employee performance

Employee performance refers to the outcomes achieved by an individual in carrying out their assigned duties, typically evaluated based on the attainment of work targets and the organizational goals that have been established. It reflects how effectively an individual or a team completes their responsibilities in alignment with organizational objectives, while adhering to predetermined performance standards (Liu & Ren, 2022).

Furthermore, employee performance indicates the level of success an individual achieves in completing assigned tasks and demonstrates the effectiveness and efficiency with which those tasks are carried out (Gong et al., 2019). According to (Pramono & Prahiawan, 2022), the indicators used to measure employee performance include the following:

- Quality of Work
 Refers to the level of accuracy, thoroughness, and overall outcome of the work performed. Higher quality indicates fewer errors and more satisfactory results.
- 2. Quantity of Work

Measures the amount of work completed within a specific period. This indicator reflects the employee's productivity.

3. Work Discipline

Relates to adherence to rules and regulations, including attendance, punctuality, and accountability in completing assigned tasks.

4. Cooperation

Evaluates the employee's ability to work collaboratively with colleagues, supervisors, and teams to achieve common goals.

5. Initiative

Reflects the extent to which an employee can take proactive actions or generate ideas without having to wait for instructions.

2.2. Productivity Work

Work productivity refers to the capacity of labor to produce goods or services within a specific period of time. High productivity indicates that a worker is able to generate greater output by utilizing available resources efficiently. Work productivity serves as a key performance indicator, both at the individual and group levels, and is typically measured based on the outcomes achieved relative to the time invested. Productivity encompasses not only the quantity of output but also its quality and alignment with targeted objectives (Nguyen & Yandi, 2020). In other words, productivity describes how effectively and efficiently labor converts inputs such as time, effort, and resources into outputs, whether in the form of goods or services, while maintaining the expected quality of results (Dedipo & Monoarfa, 2020).

According to (Feng & Savani, 2020), the following indicators are commonly used to assess work productivity:

1 Ability:

Refers to the skills, knowledge, and competencies an individual possesses to perform specific tasks. These abilities encompass both technical and non-technical aspects and can be developed through education, training, and practical experience.

2 Improvement of Achieved Results:

Involves efforts or strategies aimed at enhancing individual, team, or organizational performance to reach higher or better-quality targets. This can be accomplished through increased efficiency, innovation, or the application of best practice.

3 Work spirit

Describes the motivation and enthusiasm of employees in carrying out their duties and responsibilities. A high level of work spirit contributes significantly to increased productivity and job satisfaction.

4 Self-development

Refers to the process by which individuals actively seek to enhance their skills, knowledge, and personal capabilities in order to realize their full potential—both in the workplace and in their personal lives.

5 Quality

Denotes the level of excellence or standard applied to a product, service, or task. In the work context, quality is measured by the extent to which the output meets or exceeds established expectations.

6 Efficiency

Represents the ability to achieve desired outcomes using the least amount of resources possible, including time, labor, and materials.

Job Training

Job training refers to a systematic process designed to enhance employees' knowledge, skills, attitudes, and competencies, enabling them to perform routine tasks effectively and contribute to the successful achievement of organizational goals. Additionally, training programs enhance employees' capabilities to carry out specific tasks and responsibilities. Training plays a critical role in retaining the existing workforce by equipping employees with essential knowledge, practical skills, experience, and competencies (Hosen *et al.*, 2024). Fundamentally, job training

involves a structured process aimed at helping employees acquire new knowledge, develop new competencies, and improve existing abilities (Noor *et al.*, 2023).

According to (Pramono & Prahiawan, 2022) the indicators for measuring job training are as follows:

1. Instructor

Assesses the trainer's ability to effectively deliver the material, including mastery of the subject matter, clarity of communication, and interaction with participants.

2. Material

Refers to the relevance, comprehensiveness, up-to-dateness, and clarity of the materials presented during the training sessions.

3. Participant

Evaluates the level of participant involvement, enthusiasm, comprehension, and active participation throughout the training activities.

4. Training Duration

Measures the adequacy of time allocated for delivering the material, as well as the alignment of the schedule with participants' needs and the complexity of the topics covered. Efficient use of training time contributes positively to employee development.

5. Goals and Objectives

Examines the extent to which the training program meets its stated goals and objectives and its effectiveness in enhancing participants' competencies.

Environment Work

The work environment encompasses all elements within the workplace that influence employee productivity, motivation, and overall well-being. These elements include the organizational structure, interpersonal relationships, and physical conditions such as noise levels, air quality, lighting, and workspace design that collectively impact how employees perform and feel at work (Fajriansyah et al., 2022). The work environment can be broadly categorized into physical and non-physical aspects. Physical aspects include environmental conditions such as lighting, temperature, ventilation, and office layout. Non-physical aspects refer to social and psychological components, such as interactions among colleagues, leadership style, organizational culture, and the overall work climate (Hartati et al., 2020). A well-designed and supportive work environment contributes to increased employee satisfaction, enhanced performance, and reduced turnover, making it a critical factor for organizational success.

Indicators for Measuring a Green Work Environment (Nguyen & Yandi, 2020):

1 Work system

Refers to the structure and organization of work, including procedures, workflows, and task distribution. An efficient and well-structured work system enhances productivity by minimizing confusion and ensuring tasks are executed systematically.

2 Relationship between co-workers

Encompasses the quality of interactions and social dynamics among employees. Strong, positive relationships promote collaboration, open communication, and mutual support, all of which facilitate smoother information flow and more efficient task execution.

3 The relationship between subordinates and leaders

Describes the interaction between employees and their supervisors or managers. Constructive and supportive relationships contribute to effective communication, clearer expectations, and regular feedback, thereby enhancing employee motivation and performance.

4 Availability of facility work

Refers to the accessibility of essential tools, equipment, technologies, and other resources required to perform tasks efficiently. Adequate facilities reduce barriers to productivity and help ensure quality outcomes.

Workload

Workload refers to an individual's perception of the task demands that must be fulfilled. This encompasses the cognitive, physical, and emotional effort required to complete assigned tasks (Budiasa in Rohman et al., 2023). Workload also indicates the amount of effort an individual must exert to complete a specific volume of work within a given time frame. It includes not only the quantity of work but also the complexity and intensity involved.

Indicators for measuring workload (Budiasa in Rohman et al., 2023), include:

1. Performance Targets

The expected outcomes or goals that employees are required to achieve within a specific timeframe

2. Working Conditions

The physical and psychological conditions under which the work is performed, such as workspace, environmental factors, and organizational support

3. Utilization of Working Hours

How effectively employees use their available working time to complete tasks, including time management and work pacing

4. Work Standards

The quality and procedural benchmarks that guide how tasks should be executed to meet organizational expectations.

Based on the theoretical foundation and findings from previous studies, the conceptual framework of this research is illustrated in Figure 2.1 below:

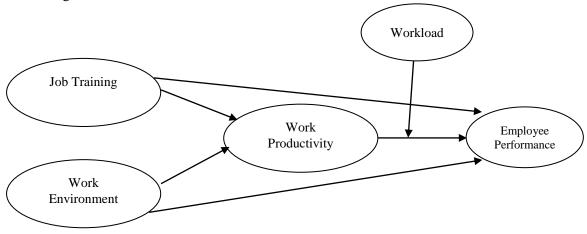


Figure 1. Thinking Framework Model

Research Methods

This research was conducted at PT. Data Link Group and focused on examining the influence of job training and the work environment on employee performance, with work productivity serving as a mediating variable and workload as a moderating variable. The study was carried out at the individual level, involving the entire population of PT. Data Link Group, which consists of 130 employees. Given the relatively small population size, a census sampling method was employed, whereby all members of the population were included as research respondents. Data collection was carried out using a structured questionnaire comprising closed-ended questions related to the study variables, designed to facilitate ease of response and ensure consistency. Data analysis was conducted using the Structural Equation Modeling (SEM) approach based on Partial Least Squares (PLS), a statistical technique suitable for testing complex relationships among variables simultaneously (Ferdinand, 2014). The advantage of SEM-PLS in management research lies in its ability to confirm the dimensions of a concept and evaluate the influence of relationships between variables according to the underlying theory (Ferdinand, 2014).

Research Results And Discussion

PT Data Link Group West Aceh is a company operating in the mining sector, specifically focused on coal commodities. The company is based in West Aceh Regency, Aceh Province an area renowned for its abundant natural

resource potential. As part of the broader PT Data Link Group, the company is committed to managing natural resources in a professional and sustainable manner.

In addition to its core mining activities, PT Data Link Group is actively involved in supporting mining operations, particularly in the provision of heavy equipment and coal transportation services (commonly known as coal hauling). With operations centered in West Aceh Regency, the company has established itself as a strategic partner for several mining companies operating in the region. By leveraging a modern fleet and a team of skilled professionals, PT Data Link Group plays a critical role in ensuring the smooth execution of coal mining operations from the excavation phase to the transportation of coal to ports or further processing facilities.

Several mining companies in West Aceh hold Mining Business Permits (IUP) and are actively conducting operations in the region. Notable among them are PT Agrabudi Jasa Bersama (AJB), PT Mifa Bersaudara, and PT Prima Bara Mahadana. PT AJB, for instance, possesses an IUP covering 5,000 hectares and is engaged in coal production operations. The company has obtained a Production Operation Permit and is currently developing a dedicated hauling road to minimize the environmental impact caused by the use of public roads.

However, mining activities in West Aceh are not without challenges particularly concerning environmental and legal issues. Several companies, including PT Bara Adhipratama and PT Prima Bara Mahadana, have been reported by the Aceh Anti-Corruption Movement for alleged legal violations related to mining business permits and the issuance of Production Operation status in 2012. Furthermore, there have been findings indicating that some companies are operating within protected forest areas, which is in violation of Law Number 4 of 2009 on Mineral and Coal Mining.

Despite these challenges, PT Data Link Group West Aceh continues to strive for compliance with all applicable regulations while contributing to regional economic development. The company remains committed to conducting periodic evaluations and reviews of its permits to ensure that all mining activities are carried out transparently, responsibly, and in accordance with the law.

Descriptive Hypothesis

The testing of the first hypothesis (H1), which is a descriptive hypothesis, was conducted using a one-sample t-test with a cut-off value of 3.4. The results are presented as follows:

One Sample Test $\overline{\text{Test V}}$ alue = 3.40 95% Confidence Interval of the Sig. (2-Mean df Difference t tailed) Difference Lower Upper Employee performance 3.58615 48.689 129 0.000 3.4404 3.7319 Job Training 55.581 129 0.000 3.77385 3.6395 3.9082 50.558 3.68846 3.8328 Work environment 129 0.000 3.5441 129 0.000 Productivity Work 51.925 3.76801 3.6244 3.9116 Workload 47.963 129 0.000 3.70000 3.5474 3.8526

Table 2. One Sample Test with Cut Off Value 3.40

Source: Processed results 2025.

Based on the results of the descriptive hypothesis testing using a one-sample t-test, all tested dimensions showed a significantly higher mean score compared to the benchmark value of 3.40 (interpreted as "Good"). This is indicated by high t-values and p-values (Sig. 2-tailed) of 0.000 for all variables. These results statistically support the hypothesis that the average perception of each dimension falls within the "Good" category.

Direct Hypothesis

The results of the SEM analysis are presented in Figure 2 below.

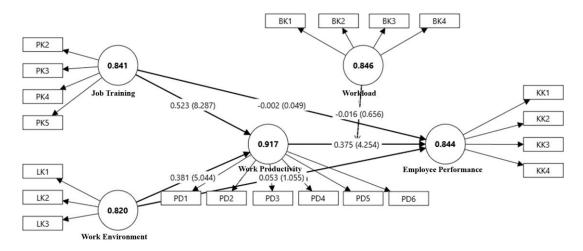


Figure 2. FULL PLS

Furthermore, the results of the direct effect analysis in this study are presented in Table 3.

Table 3 Standardized Structural Equational Model

			=		
	Original	Sample mean	Standard deviation	T statistic	P
	sample (O)	(M)	(STDEV)	(O/STDEV)	values
Training -> Productivity Work	0.523	0.519	0.063	8,287	0,000
Environment -> Productivity	0.381	0.385	0.076	5,044	0,000
Work	0.361	0.363	0.070	5,044	0,000
Training -> Employee	0.194	0.192	0.064	3,007	0.003
Performance	0.194	0.192	0.004	3,007	0.003
Environment -> Employee	0.196	0.197	0.067	2,942	0.003
Performance	0.190	0.197	0.007	2,942	0.003
Productivity Work -> Employee	0.375	0.371	0.088	4,254	0,000
Performance	0.373	0.371	0.088	4,234	0,000

Source: Processed Primary Data, (2025)

Hypothesis 2: The effect of job training on Employee performance

Job training has a significant positive effect on employee performance, as indicated by the original sample value (β) of 0.194, a t-statistic of 3.007 (greater than the critical value of 1.96), and a p-value of 0.003 (less than 0.05). Therefore, Ha₂ is accepted and H₀₂ is rejected.

Hypothesis 3: The Effect of Environment Work on Employee Performance

The work environment has been proven to have a positive and significant effect on employee performance. This is indicated by the original sample value (β) of 0.196, a t-statistic of 2.942 (greater than the critical value of 1.96), and a p-value of 0.003 (less than 0.05). Therefore, the alternative hypothesis (Ha₃) is accepted and the null hypothesis (Ho₃) is rejected.

Hypothesis 4: The Effect of Training Work on Work Productivity

Job training has a positive and significant influence on work productivity. This is evidenced by the original sample value (β) of 0.375, a t-statistic of 4.254 (which exceeds the critical threshold of 1.96), and a p-value of 0.000 (which is less than 0.05). Therefore, the alternative hypothesis (Ha₄) is accepted, and the null hypothesis (Ho₄) is rejected.

Hypothesis 5: The Effect of Environment Work on Work Productivity

The work environment has a significant positive influence on work productivity. This is indicated by the β coefficient of 0.381, a t-statistic value of 5.044 (which is greater than the critical value of 1.96), and a p-value of 0.000 (which is less than 0.05). Therefore, the alternative hypothesis (Ha₅) is accepted, and the null hypothesis (Ho₅) is rejected.

Hypothesis 6: The Effect of Work Productivity on Employee Performance

Work productivity has a positive and significant effect on employee performance. This is evidenced by a β coefficient of 0.375, a t-statistic of 4.254 (greater than the critical value of 1.96), and a p-value of 0.000 (less than 0.05). Therefore, the alternative hypothesis (H_{a6}) is accepted, and the null hypothesis (H_{o6}) is rejected.

Indirect Effect Hypothesis

In this study, there are two mediation hypotheses intended to test the indirect effects between variables. The mediation effect testing was carried out using the bootstrapping method, as presented in Table 4.

Table 4. Indirect Hypothesis

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P value s
Environment work -> Work Productivity -> Employee performance	0.143	0.143	0.046	3.118	0.002
Training work -> Work Productivity -> Employee performance	0.196	0.193	0.051	3.855	0,000

Source: Processed Primary Data, (2025)

Hypothesis 7: The Effect of Job Training on Employee Performance Through the Mediation of Work Productivity

Based on the results of the data analysis, job training has an indirect effect on employee performance through the mediating role of work productivity, with an effect value of 0.196. The t-statistic value reached 3.855, which exceeds the critical threshold of 1.96, and the p-value was 0.000, which is below the significance level of 0.05. Therefore, the alternative hypothesis (Ha7) is accepted, and the null hypothesis (H07) is rejected. This indicates that work productivity significantly mediates the relationship between job training and employee performance.

Hypothesis 8: The Effect of Work Environment on Employee Performance Through the Mediation of Work Productivity

The analysis results show that the work environment has an indirect effect on employee performance through work productivity, with a path coefficient of 0.143. The t-statistic value was 3.118, which exceeds the critical value of 1.96, and the p-value was 0.003, which is below the significance threshold of 0.05. Therefore, the alternative hypothesis (Ha8) is accepted, and the null hypothesis (H08) is rejected. This indicates that work productivity significantly mediates the relationship between the work environment and employee performance.

Hypothesis Moderation

In this study, there is one moderating hypothesis aimed at testing whether workload moderates the relationship between work productivity and employee performance. The results of the moderating hypothesis test are presented in Table 5.

Moderation Test Results

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistic (O/STDEV)	P values
Work Productivity on Employee Performance moderated by Workload	-0.016	-0.013	0.025	0.656	0.512

Source: Processed Primary Data, (2025)

Hypothesis 9: The Effect of Work Productivity on Employee Performance Moderated by Workload

The results of the data analysis indicate that the effect of work productivity on employee performance, when moderated by workload, yields a coefficient of -0.016. The t-statistic value is 0.656 (< 1.96), and the p-value is 0.512 (> 0.05). Therefore, the alternative hypothesis (Ha9) is rejected, and the null hypothesis (H09) is accepted. This

finding suggests that workload does not significantly moderate the relationship between work productivity and employee performance.

The results imply that work productivity does not exert a significant negative effect on employee performance when moderated by workload. In this context, workload may act as an intervening exogenous variable, antecedent, or predictor. An inappropriate workload whether too high or too low can generate psychological stress or reduce work motivation, ultimately leading to a decline in performance, even if employees are able to maintain quantitative productivity levels.

Hence, workload should not be considered a stand-alone variable but rather an essential reference point in understanding performance dynamics within the workplace. Workload can serve as an indicator of overall employee effectiveness. Prior studies have shown that a proportional workload is positively correlated with optimal performance, whereas extreme levels of workload are inversely related to performance outcomes. Therefore, to improve employee performance significantly, organizations must focus on adjusting workload levels appropriately, rather than merely encouraging increased productivity without accounting for employees' physical and mental capacities

Discussion

The effect of job training on Employee performance

The research findings indicate that job training has a positive and significant effect on improving employee performance. These results are consistent with previous studies by (Al-aloosy et al., 2024) and (Dedipo & Monoarfa, 2020), which demonstrated that job training substantially contributes to enhancing employee productivity and work quality. Training provides employees with opportunities to acquire and develop knowledge and skills that align with the demands of their job roles. As employee competence improves, they become more confident and better equipped to face workplace challenges, enabling them to perform tasks more effectively and efficiently.

Moreover, training reduces work-related errors, facilitates faster adaptation to technological changes, and enhances the overall quality of work outcomes. Beyond technical development, training also boosts employee motivation, as it reflects the organization's recognition and investment in their growth. This contributes to a positive work climate and fosters employee loyalty. Therefore, job training not only strengthens technical capabilities but also enhances psychological and emotional factors, which collectively lead to improved overall job performance.

The Effect of Environment Work on Employee Performance

The work environment has been proven to have a positive and significant influence on employee performance. This finding aligns with prior research by (Tleuken et al., 2022), (P. T. Nguyen et al., 2020), and (Fajriansyah et al., 2022), which demonstrated that a supportive work environment positively affects both productivity and performance. Key factors such as positive interpersonal relationships, open communication between superiors and subordinates, the availability of adequate work facilities, and a comfortable work atmosphere are critical determinants in creating a conducive work environment. A positive environment allows employees to feel safe, valued, and focused on accomplishing their tasks effectively.

Employees who operate within a healthy work environment tend to exhibit higher motivation, improved productivity, and stronger organizational loyalty. Therefore, organizations must pay close attention to both the physical and psychological aspects of the work environment as integral components of performance improvement strategies. A positive and supportive work environment has a significant impact on enhancing employee performance. When the work environment is favorable, employees feel more comfortable, motivated, and appreciated, leading them to work with greater focus and enthusiasm. Such conditions foster increased productivity, reduce work-related stress, and reinforce a sense of accountability, all of which contribute directly to the achievement of consistent and high-quality work outcomes. Thus, a well-managed work environment not only creates a pleasant atmosphere but also serves as a key driver for optimizing employee performance.

The Effect of Training Work to Work Productivity

Job training significantly contributes to improving employee productivity. This result is supported by the findings of (Labetubun & Dewi, 2022) and (Rony et al., 2024), who state that effective training can enhance work efficiency and

effectiveness. Through training, employees are able to complete tasks more quickly, accurately, and with fewer errors. It also strengthens their understanding of operational procedures and organizational standards, thereby fostering professionalism and encouraging the generation of new ideas in the workplace.

Furthermore, training serves as a means for personal development, increasing job satisfaction, and reinforcing employees' alignment with organizational goals. Thus, job training functions as a strategic investment that promotes productivity both at the individual and collective levels.

The Effect of Environment Work to Productivity Work

A supportive work environment significantly influences employee productivity. Although these findings are not entirely consistent with those of (Ingsih et al., 2021) and (Tleuken et al., 2022), the data from this study indicate that a positive work environment has a favorable impact on employees' morale and concentration.

A clean, safe, and organized workplace equipped with adequate facilities provides a sense of comfort that enables employees to carry out tasks efficiently. In addition, harmonious social relationships and effective communication contribute to creating a pleasant and productive work atmosphere. Employees who feel comfortable and valued are more likely to exhibit higher work motivation and greater focus in performing their duties. Ultimately, this results in improved work output and better quality performance, underscoring the importance of the work environment as a key factor in enhancing organizational productivity.

The Effect of Work Productivity on Employee Performance

Work productivity has been proven to have a positive and significant influence on employee performance. These findings are consistent with the studies conducted by (Fajriansyah et al., 2022), which identified productivity as a key indicator for evaluating individual performance within organizations. The more productive an employee is, the greater their contribution to the achievement of organizational goals. High productivity reflects the efficient use of time and resources, as well as the ability to complete tasks on time and with high quality. Productivity is also closely associated with motivation, a sense of responsibility, and work initiative. Therefore, organizations must ensure that every employee receives sufficient support to sustain and enhance their productivity as part of a broader performance improvement strategy.

The Effect of Job Training on Employee Performance through the Mediation of Work Productivity

This study demonstrates that work productivity mediates the influence of job training on employee performance. These findings align with those of (Ali et al., 2024), who found that training improves employee performance indirectly through increased productivity. Training enhances work efficiency, as evidenced by employees' ability to produce better outputs within the same timeframe. This improvement in productivity subsequently has a direct positive impact on individual performance, particularly in terms of speed, quality, and the achievement of work targets. In other words, training serves as a foundation for enhancing performance through the pathway of productivity, making it a crucial strategy in human resource development.

The Effect of the Work Environment on Employee Performance Through the Mediation of Work Productivity

Work productivity also mediates the influence of the work environment on employee performance. This result is consistent with the findings of (Fajriansyah et al., 2022), which indicate that the work environment affects productivity, which in turn enhances employee performance. A supportive work environment fosters efficiency, concentration, and motivation, enabling employees to be more productive and generate higher-quality outputs. This increase in productivity serves as the indirect pathway that links the work environment to improved performance. Therefore, establishing a conducive work environment should be viewed as a critical investment in the pursuit of sustainable performance improvement through enhanced productivity.

A comfortable, safe, and supportive work environment characterized by adequate facilities, harmonious interpersonal relationships, and effective communication creates a motivating atmosphere that encourages employees to work with greater focus and efficiency. The resulting improvement in productivity becomes a key mediating mechanism that explains how the work environment contributes indirectly, yet significantly, to employee performance. In other words, productivity acts as a strengthening link in the positive influence of the work

environment, with the improvement in the quality and quantity of employee output ultimately reflected in enhanced overall performance.

The Effect of Work Productivity on Employee Performance with Workload as a Moderating Variable

In this study, workload is proven to negatively moderate the relationship between work productivity and employee performance. These findings are not in line with those of (Sajad & Safrizal, 2024), who suggested that workload can strengthen this relationship. When workload becomes excessively high, even though employees remain productive in terms of output quantity, the quality of their work tends to decline. Physical fatigue, time pressure, and mental stress can disrupt performance consistency and reduce overall effectiveness. This indicates that excessive workload may hinder the translation of productivity into optimal performance. Therefore, organizations must carefully manage employee workload to maintain a balanced level, ensuring that productivity can have a truly positive and sustainable impact on performance.

Although high productivity generally has a positive effect on performance since employees are able to complete tasks efficiently and with good quality excessive workload can weaken this relationship. High workload often leads to physical and mental exhaustion, increased stress, and decreased motivation, ultimately lowering performance quality even if quantitative productivity remains high. This means that under conditions of excessive workload, productivity may no longer be a reliable indicator of effective performance. Consequently, workload management becomes a critical factor in ensuring that employee productivity contributes optimally to overall performance.

Conclusion And Suggestions

Conclusion

This study concludes that internal organizational management aspects such as the work environment, job training, employee productivity, and knowledge-sharing practices play a critical role in enhancing employee performance. Based on the results of both direct and indirect effect analyses, several key findings can be summarized as follows:

- 1. In general, the implementation of job training, management of the work environment, employee productivity, and performance achievement at PT. Data Link Group has been carried out effectively.
- 2. Job training has a proven positive and significant effect on improving employee performance at PT. Data Link Group.
- 3. The work environment also exerts a significant and positive influence on employee performance within the company.
- 4. Job training positively and significantly contributes to the improvement of employee work productivity.
- 5. A conducive work environment significantly contributes to enhancing employee productivity at PT. Data Link Group.
- 6. Work productivity has a significant and positive relationship with employee performance.
- 7. Work productivity effectively mediates the relationship between job training and employee performance, indicating that the impact of training on performance occurs through improved productivity.
- 8. Work productivity also significantly mediates the relationship between the work environment and employee performance, reinforcing the notion that a positive work environment supports performance improvement via increased productivity.
- 9. Workload does not strengthen the positive influence of productivity on performance. In other words, when the workload is high, the relationship between productivity and performance becomes statistically insignificant.

Suggestion

- 1) Implementing Targeted and Ongoing Training Programs.
 - PT. Data Link Group should consistently conduct training programs that are aligned with industry demands and developments, including both technical and soft skills training. Need-based training is more effective in enhancing employee competencies and can be tailored to current technological advancements and strategic business directions. Furthermore, the effectiveness of these training programs should be regularly evaluated to ensure that they result in measurable improvements in employee performance.

- 2) Creating a Safe, Comfortable, and Collaborative Work Environment. The company must strive to cultivate a work environment that is safe, comfortable, and conducive to collaboration. This can be achieved by enhancing workplace facilities, ensuring ergonomic workspace design, and fostering a positive, open organizational culture. Strong interpersonal relationships between employees and management should be maintained through active, transparent, and reciprocal communication.
- 3) Enhancing Productivity Through Efficient Systems and Workload Management. To boost productivity, the company can implement efficient work systems, such as integrating automation technologies, enforcing effective time management, and establishing clear role delineations. It is also crucial to provide performance-based incentives or rewards to maintain employee motivation. Attention must be given to maintaining a balanced workload, as excessive work demands can hinder productivity and impair performance.
- 4) Establishing a Transparent and Holistic Performance Evaluation System. PT. Data Link Group should adopt an objective and transparent performance appraisal system that evaluates not only outcomes but also work processes and behavioral indicators. Providing regular feedback and coaching from supervisors can help employees identify their strengths and development areas. Additionally, well-structured and equitable career development pathways can enhance employee motivation and foster greater organizational loyalty.

References

- 1. Al-aloosy, K. F. Q., Mirvalad, S., & Shabakhty, N. (2024). Evaluating the impact of internet communication quality in human resource management on the productivity of construction projects. *Heliyon*, 10(7), e28500. https://doi.org/10.1016/j.heliyon.2024.e28500
- 2. Ali, S. R., Masud, A. Al, Hossai, M. A., Islam, K. M. Z., & Ala, S. M. S. (2024). Weaving a greener future: The impact of green human resources management and green supply chain management on sustainable performance in Bangladesh's textile industry. *Cleaner Logistics and Supply Chain*, 10, 100143. https://doi.org/https://doi.org/10.1016/j.clscn.2024.100143
- 3. Dedipo, A. N., & Monoarfa, V. (2020). Pengaruh Pengembangan Sumber Daya Manusia Terhadap Produktivitas Kerja Pengrajin Di Rumah Karawo. *JAMBURA: Jurnal Ilmiah Manajemen Dan Bisnis*, 3(1), 1–6. https://doi.org/https://doi.org/10.37479/jimb.v3i1.7124
- 4. Fajriansyah, Muh Imam Taufiq, Halida Sasmita, Aminuddin Hamdat, & A We Tenri Fatimah Singkeruang. (2022). Pengaruh Lingkungan Kerja Dan Produktivitas Kerja Terhadap Kinerja Pegawai Rumah Sakit Umum Daerah Daya Di Masa Covid-19. *Jurnal Sains Manajemen Nitro*, 1(2), 150–160. https://doi.org/10.56858/jsmn.v1i2.95
- 5. Feng, Z., & Savani, K. (2020). Covid-19 created a gender gap in perceived work productivity and job satisfaction: implications for dual-career parents working from home. *Gender in Management*, 35(7/8), 719–736. https://doi.org/10.1108/GM-07-2020-0202
- 6. Ferdinand, A. (2014). Structural Equation Modeling dalam Penelitian Manajemen; Aplikasi Model-model Rumit Dalam Penelitian untuk Skripsi, Tesis dan Disertasi. *Penerbit Universitas Diponegoro. Semarang*.
- 7. Gong, Z., Chen, Y., & Wang, Y. (2019). The Influence of Emotional Intelligence on Job Burnout and Job Performance: Mediating Effect of Psychological Capital. *Frontiers in Psychology*, 10, 1–11. https://doi.org/https://doi.org/10.3389/fpsyg.2019.02707
- 8. Hartati, Y., Ratnasari, S. L., & Susanti, E. N. (2020). Pengaruh Kompetensi, Komunikasi, Dan Lingkungan Kerja Terhadap Kinerja Karyawan Pt. Indotirta Suaka. *Jurnal Dimensi*, 9(2), 294–306. https://doi.org/10.33373/dms.v9i2.2542
- 9. Hosen, S., Hamzah, S. R. ah, Arif Ismail, I., Noormi Alias, S., Faiq Abd Aziz, M., & Rahman, M. M. (2024). Training & development, career development, and organizational commitment as the predictor of work performance. *Heliyon*, 10(1), e23903. https://doi.org/10.1016/j.heliyon.2023.e23903
- 10. Ingsih, K., Riskawati, N., Prayitno, A., & Ali, S. (2021). the Role of Mediation on Work Satisfaction To Work Environment, Training, and Competency on Employee Performance. *Jurnal Aplikasi Manajemen*, *19*(3), 469–482. https://doi.org/10.21776/ub.jam.2021.019.03.02

- 11. Labetubun, M. R., & Dewi, I. G. A. M. (2022). Organizational Commitment: It's Mediating Role in the Effect of Human Resource Management Practices and Workplace Spirituality on Employee Performance. *Europan Journal of Business and Management Research*, 7(2), 112–123. https://doi.org/https://doi.org/10.24018/ejbmr.2022.7.2.1279
- 12. Liu, X., & Ren, X. (2022). Analysis of the Mediating Role of Psychological Empowerment between Perceived Leader Trust and Employee Work Performance. *International Journal of Environmental Research and Public Health*, *19*(11), 1–26. https://doi.org/https://doi.org/10.3390/ijerph19116712
- 13. Nguyen, D. T., & Dao, T. K. (2023). The mediating role of innovation in the relationship between high-performance human resource management practices and firm performance. *Heliyon*, 9(12), e22720. https://doi.org/10.1016/j.heliyon.2023.e22720
- 14. Nguyen, P. T., Yandi, A., & Mahaputra, M. R. (2020). Factors That Influence Employee Performance: Motivation, Leadership, Environment, Culture Organization, Work Achievement, Competence and Compensation (a Study of Human Resource Management Literature Studies). *Dinasti International Journal of Digital Business Management (DIJDBM)*, *I*(4), 1–16. https://doi.org/https://doi.org/10.31933/dijdbm.v1i4.389
- 15. Noor, J., Tunnufus, Z., Handrian, V. Y., & Yumhi, Y. (2023). Green human resources management practices, leadership style and employee engagement: Green banking context. *Heliyon*, 9(12), e22473. https://doi.org/10.1016/j.heliyon.2023.e22473
- 16. Phong Thanh Nguyen, Andri Yandi, M. R. M. (2020). ARTICLE INFORMATION Received: 18. *Dijdbm*, *1*(4), 645–662. https://doi.org/10.31933/DIJDBM
- 17. Pramono, A. C., & Prahiawan, W. (2022). Effect Of Training On Employee Performance With Competence And Commitment As Intervening. *APTISI Transactions on Management*, 6(2), 142–150. https://doi.org/https://doi.org/10.33050/atm.v6i2.1742
- 18. Rohman, S. N., Ambarwati, D., & Saptariia. (2023). Pengaruh Beban Kerja dan Lingkungan Kerja terhadap Kinerja Karyawan PT Karunia Ultima Kemasan Jatikalen Nganjuk. *Jurnal Penelitian Mahasiswa*, 2(1–16), 1. https://doi.org/10.33087/ekonomis.v7i1.631
- 19. Rony, Z. T., Wijaya, I. M. S., Nababan, D., Julyanthry, J., Silalahi, M., Ganiem, L. M., Judijanto, L., Herman, H., N., & Saputra. (2024). Analyzing the Impact of Human Resources Competence and Work Motivation on Employee Performance: A Statistical Perspective. *Journal of Statistics Applications & Probability*, *13*(2), 787–793. https://doi.org/https://dx.doi.org/10.18576/jsap/130216
- 20. Sajad, I. M. A., & Safrizal, H. B. A. (2024). Pengaruh Workload dan Role Conflict Terhadap Employee Performance dengan Job Stress Sebagai Variabel Mediasi pada UMKM di Pamekasan. *Jurnal Ekonomi*, 20(1), 141–152. https://doi.org/https://doi.org/10.31967/relasi.v20i1.971
- 21. Tleuken, A., Turkyilmaz, A., Sovetbek, M., Durdyev, S., Guney, M., Tokazhanov, G., Wiechetek, L., Pastuszak, Z., Draghici, A., Boatca, M. E., Dermol, V., Trunk, N., Tokbolat, S., Dolidze, T., Yola, L., Avcu, E., Kim, J., & Karaca, F. (2022). Effects of the residential built environment on remote work productivity and satisfaction during COVID-19 lockdowns: An analysis of workers' perceptions. *Building and Environment*, 219(April). https://doi.org/10.1016/j.buildenv.2022.109234
- 22. Zhenjing, G., Chupradit, S., Ku, K. Y., Nassani, A. A., & Haffar, M. (2022). Impact of Employees' Workplace Environment on Employees' Performance: A Multi-Mediation Model. *Frontiers in Public Health*, 10(May). https://doi.org/10.3389/fpubh.2022.890400