The Influence of Workload and Work Environment on Employee Performance *Billing Management* Mediated by Job Satisfaction at PLN UP3 Samarinda

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ABSTRACT : *This study examines the influence of workload and work environment on the performance of Billing Management (Billman) employees at PLN UP3 Samarinda, with job satisfaction as a mediating variable. Using an explanatory research approach, data were collected from 185 respondents through a saturated sampling technique and analyzed using Partial Least Square (PLS) via SmartPLS software. The results indicate that workload has a positive but insignificant effect on both employee performance and job satisfaction. In contrast, work environment has a positive and significant effect on both performance and job satisfaction. Job satisfaction is also proven to significantly influence employee performance. Mediation testing reveals that job satisfaction does not mediate the relationship between workload and performance, but significantly mediates the influence of work environment on employee performance. These findings affirm that work environment quality is the dominant strategic factor shaping Billman employee satisfaction and performance at PLN UP3 Samarinda. Organizations are therefore encouraged to invest in improving physical conditions, safety standards, social relationships, and organizational climate as integral components of human resource management strategy.*

Keywords - *Billing Management, employee performance, job satisfaction, work environment, workload*

ABSTRACT : This study examines the influence of workload and work environment on the performance of Billing Management (Billman) employees at PLN UP3 Samarinda, with job satisfaction as a mediating variable. Using an explanatory research approach, data was collected from 185 respondents through saturated sampling techniques and analyzed using Partial Least Square (PLS) with SmartPLS software. The results of the study show that workload has a positive but not significant effect on employee performance and job satisfaction. On the other hand, the work environment has a positive and significant effect on performance and job satisfaction. Job satisfaction has also been shown to have a positive and significant effect on performance. In the mediation test, job satisfaction was not shown to mediate the relationship between workload and performance, but significantly mediated the influence of the work environment on employee performance. These findings confirm that the quality of the work environment is the dominant strategic factor that shapes the satisfaction and performance of Billman employees at PLN UP3 Samarinda. Organizations are encouraged to invest in improving the physical condition, safety standards, social relations, and climate of the organization as integral components of a human resource management strategy.

Keywords : Workload, job satisfaction, employee performance, work environment, Billing Management

I. INTRODUCTION

In an increasingly dynamic business competitive landscape, human resource management (*Human Resource Management*) has transformed from just an administrative function to a strategic pillar that determines the sustainability and competitiveness of the organization. Human capital is a fundamental asset in the company's development process, where employees do not solely carry out operational routines, but play an active role as agents of innovation and catalysts for organizational change [1]. This premise is the main foundation that encourages the urgency of research on the factors that shape employee performance, especially in the context of public service companies that are in direct contact with the interests of the wider community.

PT PLN (Persero) as a state-owned energy company faces multi-layered challenges in maintaining service quality while maintaining operational efficiency. Through the *outsourcing* scheme, PLN formed PT Paguntaka Cahaya Nusantara under the auspices of PT PLN Nusa Daya as a specialist labor provider, one of which is *a Billing Management* (Billman) employee who serves in the PLN UP3 Samarinda area. Billman plays a crucial role as he is responsible for the accuracy of recording customers' electricity usage and bill management, two aspects that directly determine the company's revenue stream. The slightest mistake in this process has the potential to trigger financial losses, degradation of service quality, and decreased customer trust.

However, the reality of the field shows conditions that are far from ideal. Billman's employees face work pressure (*Work pressure*intense physical environment, varied and not always conducive physical environmental conditions, and workload (*workload*) which is quite heavy with recording and billing targets that must be met within strict deadlines. This phenomenon creates a potential conflict between the demands of high productivity on the one hand, and the limitations of individual capacity on the other. Not optimal human resource management will lead to low productivity, increasing *Turnover*, and the organization's failure to achieve the set targets [2].

The study of the work environment provides an important perspective in understanding the dynamics of employee performance. Safe, harmonious, and comfortable work significantly increases employee motivation, loyalty, and job satisfaction [3]. For Billman who works in the field with diverse physical conditions, environmental factors such as team coordination, vertical communication with superiors, and occupational safety protection are decisive elements of productivity. An unsupportive work environment not only hinders technical performance, but also erodes employee morale and commitment to the organization.

On the other hand, workload dimensions are also a critical variable that cannot be ignored. Excessive workload (*Work overload*) consistently lowers intrinsic motivation, magnifies the risk of work stress, and ultimately degrades the overall quality of performance [4]. Overload conditions without adequate environmental support negatively impact engagement (*Commitment*) employees and the quality of the work. In the context of Billman, the imbalance between the volume of work and available resources has the potential to reduce the accuracy of recording and slow down the billing process, both of which have a direct impact on the operational performance of PLN UP3 Samarinda [5].

An equally important mediation factor is job satisfaction (*Job Satisfaction*). Job satisfaction has a direct and significant relationship with productivity and *Turnover* employees, making them a strategic variable that management must pay attention to. Job satisfaction is simultaneously influenced by the quality of the work relationship, the distribution of the workload, and the physical conditions of the work environment [6]. A supportive organizational environment, open communication, and appreciation for achievements have been proven to increase job satisfaction despite high job demands. Thus, job satisfaction acts as a bridge (*Mediating Variable*) which transmits the influence of the work environment and workload on the final performance of employees.

This research is here to fill the *research gap* found from the inconsistency of previous research results regarding the relationship between workload, work environment, and employee performance, especially by considering the role of job satisfaction mediation that has not been widely explored in the context of outsourcing power in the electricity sector in Indonesia. Specifically, this study aims to analyze the direct influence of workload and work environment on the performance of Billman employees, examine the influence of these two variables on job satisfaction, and examine the role of job satisfaction as a mediating variable in the relationship between workload and work environment and employee performance at PLN UP3 Samarinda.

The contribution of this study is twofold: theoretically, this study enriches the human resource management literature by providing empirical evidence on the mediation mechanism of job satisfaction, in line with the conceptual framework that job satisfaction is a comprehensive assessment of employees of their work that includes aspects of the environment, social relations, and working conditions. Practically, the research findings are expected to be a guide for the management of PLN UP3 Samarinda in designing a more effective HR management strategy, creating a conducive work environment, distributing the workload proportionately, and ultimately ensuring that Billman's operational performance remains optimal for the stability of the Company's revenue flow [7].

II.   LITERATURE REVIEW

2.1 Human Resource Management

Human resource management (*Human Resource Management*) is a formal system designed to manage individuals in an organization effectively and efficiently [8]. As a set of policies that aim to maximize organizational integration, employee engagement, and flexibility to achieve a competitive advantage. complements this perspective by emphasizing that HR includes the process of acquiring, training, assessing, and managing employee working relationships as a whole, including safety and fairness aspects, as the foundation for achieving organizational strategic goals.

2.2 Workload

Workload or workload is an individual's perception of the amount of work demands that must be completed within a certain time limit, both physically and mentally. The gap between the capacity of workers and the demands of the tasks faced. Workload indicators include working time, number of jobs, suitability of tasks to abilities, and work pressure (*Work pressure*) experienced by employees. Three main indicators: *Target* what must be achieved, working conditions, and applicable work standards [9].

2.3 Work Environment

The work environment is the overall conditions around employees that affect the way they complete tasks, including the physical, social, psychological, and cultural dimensions of the organization. Organizations that are able to create a healthy and safe work environment will find it easier to achieve their goals, because employees feel valued and motivated. Indicators of the work environment include physical conditions (lighting, ventilation, cleanliness), occupational safety and security, social relations between employees, organizational support, and overall organizational culture and climate.

2.4 Job Satisfaction

Job satisfaction or job satisfaction is an employee's general attitude towards their work that reflects the difference between the rewards they receive and the ones they should earn. A pleasant or unpleasant emotional state that is reflected in the employee's positive attitude towards his or her work environment. Perceptions of distributional, procedural, and interactional fairness play an important role in shaping job satisfaction. Indicators of job satisfaction include job satisfaction itself, compensation, promotion opportunities, quality of supervision, relationships between co-workers, and balance *Work-life* [10].

2.5 Employee Performance

Employee performance is the result of employee achievement based on work functions within a certain period of time according to the criteria set by the organization. The performance of an organization is highly dependent on the individual performance of its employees. Performance measurement includes indicators of quality *of work*, *job ability*, and personal qualities. Indicators of productivity, job knowledge, *dependability*, initiative, and independence as comprehensive dimensions in assessing employee performance qualitatively and quantitatively.

2.6 Relationships Between Variables

Workload has a complex relationship with employee performance. High workloads encourage *workaholism* which initially increases work intensity, but then degrades performance due to stress and fatigue. The total workload, but rather the composition of its dimensions determines the impact on performance. *Work engagement* plays an important role as a mediator, emphasizing that organizational support is able to reduce the negative impact *of work overload* on employee performance.

A conducive work environment has been proven to improve performance directly or through mediation mechanisms. A positive work environment improves task performance through employee commitment and *achievement-striving*. A supportive environment that includes job recognition and career development is positively associated with performance through *employee engagement*. Physical elements such as lighting, noise, and spatial layout have a significant impact on employee productivity on a sustainable basis.

An unbalanced workload consistently lowers job satisfaction [11]. When job demands exceed individual capacity, satisfaction decreases significantly. *Job control* can moderate the negative relationship between mental workload and health worker satisfaction. High workload accompanied by a negative work environment cumulatively lowers satisfaction, while emphasizing the importance of organizational interventions to balance workload to maintain employee satisfaction.

The quality of the work environment has a real effect on the level of employee satisfaction. The physical and non-physical factors of the work environment significantly affect employee motivation and satisfaction. Interpersonal trust (*Interpersonal Trust*) in a social environment is positively associated with job satisfaction. Structural support and *sense of community at work* able to neutralize the negative impact of work demands on satisfaction, supported by the fact that a good practice environment correlates with higher satisfaction [12].

Job satisfaction is a strong predictor for improving employee performance. A significant positive correlation between satisfaction and performance confirms that increasing satisfaction is an effective strategy to boost organizational productivity. Work environment and *reward factors* play an important role in driving satisfaction which ultimately improves performance. *PLS-SEM* confirms that a positive organizational culture improves performance, which further impacts employee satisfaction on an ongoing basis.

2.7 Concept Framework

Based on theoretical analysis and previous research, the conceptual framework of this study describes the relationship between the variables studied, namely workload and work environment as independent variables, job satisfaction as a mediating variable, and employee performance as dependent variables.
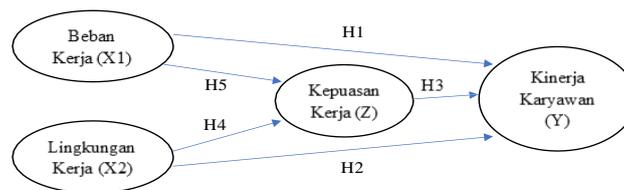
Figure 1. Concept Framework

2.8 Hypothesis

H1: Workload affects the performance of Billman (*Billing Management*) employees at PLN UP3 Samarinda.

H2: The work environment affects the performance of Billman (*Billing Management*) employees at PLN UP3 Samarinda.

H3: Job satisfaction affects the performance of Billman (*Billing Management*) employees at PLN UP3 Samarinda.

H4: The work environment affects the job satisfaction of Billman employees (*Billing Management*) at PLN UP3 Samarinda.

H5: Workload affects the job satisfaction of Billman employees (*Billing Management*) at PLN UP3 Samarinda.

H6: Job satisfaction mediates the influence of workload on the performance of Billman (*Billing Management*) employees at PLN UP3 Samarinda.

H7: Job satisfaction mediates the influence of the work environment on the performance of Billman (*Billing Management*) employees at PLN UP3 Samarinda.

III.   RESEARCH METHODS

This study uses *an explanatory research* approach, which is an approach that aims to explain the causal relationship between variables through systematic hypothesis testing (Sekaran, 2003). This approach was chosen because the study intends to analyze the influence of workload and work environment on the performance *of Billing Management* (Billman) employees, with job satisfaction as a mediation variable, within PLN UP3 Samarinda.

The population in this study is all Billman employees who serve in the operational area of PLN UP3 Samarinda, which totals 185 people and comes from PT Paguntaka Cahaya Nusantara as the outsourced power manager. The sampling technique used is *saturated sampling*, where all members of the population are used as research samples. Thus, the total sample used amounted to 185 respondents, including coordinators and field officers spread across seven *Customer Service Units* (ULPs) in the Samarinda area and three surrounding districts.

Data collection is carried out in two ways. First, the distribution of a structured questionnaire prepared using *Likert Scale* five points to record the respondents' direct perception of the variables being studied. Second, interviews with personnel to obtain additional information that supports the understanding of the research context. The research instrument was tested using a validity test with a value limit *Correlated Item-Total Correlation* $\geq$ 0.3 [13], as well as reliability tests with value limits *Cronbach Alpha* $\geq$ 0.6, to ensure the consistency and accuracy of the measuring instruments used.

Data analysis was carried out in two stages. First, descriptive statistical analysis to describe the frequency distribution and the tendency of respondents to each variable. Second, analysis *Partial Least Square* (PLS) using the software *SmartPLS*, which was chosen for its ability to work at a wide range of data scales without requiring normal distribution assumptions and not relying on large sample sizes. Model evaluation includes *Outer model* Through the test *convergent validity* (value *Loading* $\geq$ 0.5), *Discriminant validity* (value *AVE* $\geq$ 0.50), and *Composite reliability* ($\geq$ 0.7), and *Inner model* through the value of *R-square* and *Q-square predictive relevance* [11]. Hypothesis testing is carried out using the *Resampling bootstrapping* Using Test Statistics *t*, so that the assumption of free data distribution (*Distribution free*) is fulfilled. The mediation test was carried out by comparing the values *t count* against *t table* to determine whether job satisfaction serves as the perfect mediation (*Complete mediation*) or partial mediation (*Partial Mediation*) in the relationship between variables. The linearity test was also carried out using the *Curve Fit* Help *Software* SPSS as a basic assumption of structural equation modeling.

IV.   RESULTS AND DISCUSSION

4.1 Respondent Characteristics

This study involved 185 *Billing Management* (Billman) employees who served in PLN UP3 Samarinda. To get a comprehensive picture of respondents' profiles, demographic data was collected based on four main dimensions, namely gender, age, education level, and length of employment. The composition of respondents was dominated by male employees at 97.8%, which reflects the characteristics of Billman's job that

demands high mobility. In terms of age, the majority of respondents are in the productive age range of 21-30 years old at 84.3%, which indicates that the workforce of Billman PLN UP3 Samarinda is dominated by the younger generation with high adaptation potential. From the educational aspect, most of the respondents had a high school education (87.6%), reflecting that Billman's work emphasizes more on technical skills in the field. Meanwhile, judging from the working period, the largest group is employees with 2-3 years of work experience at 53%, followed by 4-5 years at 30.3%, which shows that most employees have sufficient experience in understanding the operational dynamics of recording and electricity billing.

4.2 Descriptive Respondents

Respondents' perception measurement was carried out through descriptive analysis using the *Three-box method* approach (Ferdinand, 2014), where the index range was divided into three categories: Low (20–46.66), Medium (46.67–73.32), and High (73.33–100). This approach aims to describe the tendency of respondents' perception and assessment of each indicator in the variables that are studied systematically and measurably.

4.2.1 Respondent Perception of Workload Variables (X1)

Workload variables are measured through four indicators, namely working time, number of jobs, assigned tasks, and work pressure. Overall, all indicators obtained index values in the high category based on *the Three-box method*. The working time indicator obtained the highest index score of 80.88, with 43.8% of respondents giving an assessment in the good category. The task indicator given obtained an index of 79.02, where 62.7% of respondents rated it in a good range. The work pressure indicator obtained an index of 78.28 with 52.4% of respondents having a good perception, while the number of work indicators obtained an index of 77.20 with a majority of 62.2% of respondents assessing it well. These findings show that Billman PLN UP3 Samarinda employees perceive the workload they bear as a whole in the high category and still within manageable limits, although a small number of respondents on each indicator still give sufficient assessments, which indicates the need for management's attention to the distribution and management of workload in a more proportionate manner.

4.2.2 Respondents' Perception of Work Environment Variables

Work environment variables are measured through five main indicators, namely physical conditions, occupational safety and security, social relations in the workplace, organizational support, and organizational culture and climate. Based on the results of the distribution of respondents' answers to the work environment variable, overall all indicators obtained an index value in the high category. The physical condition indicator obtained the highest index value of 82.82, of which 64.3% of respondents gave an assessment in the good range (3.40–4.19). The indicators of occupational safety and security as well as social relations in the workplace each obtained an index of 82.06, showing that the aspects of occupational safety and the quality of interaction between employees were well perceived by the majority of respondents. Meanwhile, the culture and climate of the organization obtained an index of 80.54, and the support of the organization obtained an index of 77.84 which is still classified as high. These findings show that the working environment conditions at PLN UP3 Samarinda are generally perceived positively by Billman employees, although the aspect of organizational support still requires further attention because it obtained the lowest index value among other indicators.

4.2.3 Respondents' Perception of Job Satisfaction Variables

Job satisfaction variables are measured using five indicators, including employment, wages, promotions, supervision, and colleagues. The results of the distribution of respondents' answers on the job satisfaction variable showed quite diverse variations between indicators. The work indicator obtained the highest index value of 86.50, which indicates that employees are satisfied with the content and responsibilities of the work undertaken. The wage indicator obtained an index of 78.26, which is still classified as high. On the other hand, the promotion indicator obtained an index of 72.72 and surveillance of 70.58, both of which were in the medium category. The peer indicator also obtained an index of 70.60 in the medium category. These findings indicate that the job satisfaction of Billman PLN UP3 Samarinda employees is relatively good in terms of work and compensation, but it still needs to be improved in terms of promotion opportunities, quality of supervision, and quality of relationships between colleagues.

4.2.4 Respondent Perception of Performance Variables

Performance variables are measured through three main indicators, namely *quality of work*, *job ability*, and personal qualities. The results of the distribution of respondents' answers on the performance variable showed that the personal qualities indicator obtained the highest index score of 78.92, which was included in the high category. This shows that Billman's employees have integrity and a good work ethic in carrying out their duties. Meanwhile, the *quality of work* indicator obtained an index of 69.30 and *job ability* of 68.86, both of

which are in the medium category. This condition indicates that even though the aspect of personal integrity of employees is considered high, the accuracy of work results and the level of technical skills in recording and reporting customer electricity usage data still need to receive attention and further improvement by the management of PLN UP3 Samarinda.

4.3 Data Analysis

Data analysis in this study was carried out using *the Partial Least Square* (PLS) method assisted by *SmartPLS software*, which includes the evaluation of *the outer model* and *the inner model*. External *model* evaluation aims to test the validity and reliability of research instruments, while *internal model* evaluation is used to assess the predictive strength of the overall structural model. At the convergent validity stage, the test is carried out through *the outer loading* value of each indicator. The test results showed that all indicators in the four research variables had a *loading value* above 0.60, so that they were declared to meet the criteria for convergent validity.

TABLE 1. *Outer Loading*

| Indicator	Workload	Work Environment	Job Satisfaction	Performance
Working time	0.622			
Number of jobs	0.808			
Assigned tasks	0.804			
Work pressure	0.787			
Physical Condition		0.697		
Occupational Safety and Security		0.824		
Social Relations In The Workplace		0.756		
Organizational Support		0.836		
Organizational Culture and Climate		0.793		
Quality of work				0.797
Employability				0.862
Personal Quality				0.909
Jobs			0.785	
Wages			0.834	
Promotions			0.838	
Supervisor			0.828	
Colleagues			0.783	

Source : Primary Data processed, 2025
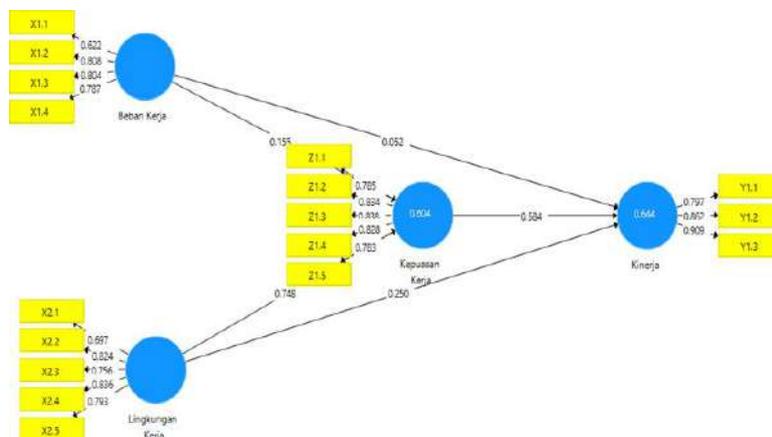
Figure 1. Structural Models
Source : Primary Data processed, 2025

Furthermore, *discriminant validity* testing was carried out through *cross loading* analysis. The results showed that each indicator had the highest *loading* value on the corresponding construct compared to the other constructs, which confirmed the fulfillment of *the discriminant validity* criteria.

TABLE 2. *Cross Loading*

	Workload	Work Environment	Job Satisfaction	Performance
Working time	0.622	0.033	0.104	0.141
Number of jobs	0.808	0.058	0.186	0.150
Assigned tasks	0.804	0.064	0.157	0.143
Work pressure	0.787	0.108	0.208	0.182
Physical Condition	0.171	0.697	0.558	0.508
Occupational Safety and Security	0.087	0.824	0.659	0.628
Social Relations In The Workplace	0.128	0.756	0.483	0.459
Organizational Support	-0.035	0.836	0.622	0.530
Organizational Culture and Climate	0.027	0.793	0.633	0.588
Quality of work	0.130	0.514	0.594	0.797
Employability	0.170	0.609	0.681	0.862
Personal Quality	0.218	0.665	0.736	0.909
Jobs	0.071	0.558	0.785	0.620
Wages	0.106	0.697	0.834	0.678
Promotions	0.292	0.534	0.838	0.661
Supervisor	0.264	0.632	0.828	0.600
Colleagues	0.175	0.663	0.783	0.635

Source : Primary Data processed, 2025

The *Average Variance Extracted* (AVE) value test showed that all variables had values above 0.50, namely workload of 0.576, work environment of 0.613, job satisfaction of 0.662, and performance of 0.735. This proves that the entire construct meets the required convergent validity standards.

TABLE 3. *Average Variance Extracted*/**AVE**

Variable	*Average Variance Extracted* (AVE)	Minimum Loading (AVE)	Remarks
Workload	0,576	≥ 0.5	Valid
Work Environment	0,613	≥ 0.5	Valid
Job Satisfaction	0,662	≥ 0.5	Valid
Performance	0.,735	≥ 0.5	Valid

Source : Primary Data processed, 2025

In terms of reliability, all study variables showed *Composite Reliability* and *Cronbach's Alpha* values that exceeded the threshold of 0.70, indicating strong internal consistency in each construct.

TABLE 4. Reliability Test Results

Variable	*Composite Reliability*	*Cronbach's Alpha*	Remarks
Workload	0.843	0.753	Reliable
Work Environment	0.887	0.841	Reliable
Job Satisfaction	0.907	0.872	Reliable
Performance	0.892	0.819	Reliable

Source : Primary Data processed, 2025

In the *internal evaluation of the model*, the *R-Square* (R^2) value for the job satisfaction variable of 0.604 indicates that 60.4% of the variation in job satisfaction can be explained by independent variables in the model. Meanwhile, a performance R^2 value of 0.644 indicates that 64.4% of the performance variation can be explained by the model being built. The *Q-Square predictive relevance* value is calculated as 0.860, which is well above the number 0, so the model is declared to have excellent predictive relevance.

TABLE 5. R-Square

	R Square	*Adjusted R Square*
Job Satisfaction	0.604	0.592
Performance	0.644	0.628

Source : Primary Data processed, 2025

TABLE 6. Path Coefficients

	Original Sample	Sample Average	Standard Deviation	T Statistics	P Values
Workload -> Performance	0.052	0.064	0.079	0.651	**0.515**
Work Environment -Performance >	0.250	0.247	0.111	2.243	**0.025**
Job Satisfaction -> Performance	0.584	0.580	0.101	5.788	**0.000**
Work Environment - > Job Satisfaction	0.748	0.745	0.052	14.354	**0.000**
Workload -> Job Satisfaction	0.155	0.166	0.080	1.935	**0.054**

Source : Primary Data processed, 2025

TABLE 7. Effects of Indirect Influence

	Original Sample	Sample Average	Standard Deviation	T Statistics	P Values
Workload -> Job Satisfaction -> Performance	0.090	0.097	0.049	1.830	**0.068**
Work Environment -> Job Satisfaction -> Performance	0.437	0.433	0.087	5.006	**0.000**

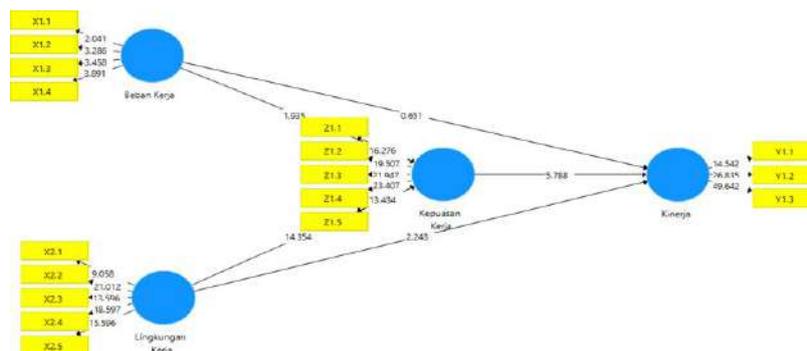*Source : Primary Data processed, 2025*

Figure 2. Bootstrapping Results
Source : Primary Data processed, 2025

4.4 Hypothesis Testing

Hypothesis testing was carried out based on *t-statistical values* and *p-values* at a significance level of 0.05, with a *limit of t-table* values of 1.97. An alternative hypothesis is accepted when *the t-value* of the > 1.97 and *the p-value* < 0.05. H1 – Workload to Performance: The test results showed a coefficient value of 0.052 with *a t-value* of 0.651 and *a p-value* of 0.515. Because the *t-statistical* value < 1.97 and *the p-value* > 0.05, the workload has a positive but not significant effect on employee performance. H1 was rejected. H2 – Work Environment to Performance: The test results showed a coefficient value of 0.250 with *a t-statistic* of 2.243 and *a p-value* of 0.025. Because the *t-statistical* value > 1.97 and *the p-value* < 0.05, the work environment has a

positive and significant effect on employee performance. H2 is accepted. H3 – Job Satisfaction with Performance: The test results showed a coefficient value of 0.584 with *a t-statistic* of 5.788 and *a p-value* of 0.000. Because the *t-statistical* value > 1.97 and *the p-value* < 0.05, job satisfaction has a positive and significant effect on employee performance. H3 accepted.

H4 – Work Environment to Job Satisfaction: The test results showed a coefficient value of 0.748 with *a t-statistic* of 14.354 and *a p-value* of 0.000. Because the *t-statistical* value > 1.97 and *the p-value* < 0.05, the work environment has a positive and significant effect on job satisfaction. H4 accepted. H5 – Workload to Job Satisfaction: The test results showed a coefficient value of 0.155 with *a t-statistic* of 1.935 and *a p-value* of 0.054. Because the *t-statistical* value < 1.97 and *the p-value* > 0.05, the workload has a positive but insignificant effect on job satisfaction. H5 was rejected. H6 – Job Satisfaction Mediates Workload to Performance: The test results showed a coefficient value of 0.090 with *a t-statistic* of 1.830 and *a p-value* of 0.068. Because *the t-value* < 1.97 and *the p-value* > 0.05, job satisfaction has not been shown to mediate the effect of workload on performance significantly. H6 was rejected. H7 – Job Satisfaction Mediates Work Environment on Performance: The test results showed a coefficient value of 0.437 with *a t-statistic* of 5.006 and *a p-value* of 0.000. Because the *t-statistical* value > 1.97 and *the p-value* < 0.05, job satisfaction has been proven to mediate the influence of the work environment on performance positively and significantly. H7 accepted.

4.5 Discussion

The Effect of Workload on Performance. The results of the analysis show that workload has a positive but not significant effect on the performance of Billman PLN UP3 Samarinda employees. This condition indicates that the fluctuations in work demands faced by employees are not strong enough to drive real changes in performance levels. This phenomenon can be explained through the ability of employees to adapt to the work rhythm that has become part of the daily operational routine. Robbins & Judge (2017) explain that the relationship between workload and performance is not always linear; Workloads that are still within tolerance limits can actually be a catalyst for productivity, while uncontrolled loads have the potential to trigger stress. In the context of Billman, performance stability is determined more by intrinsic factors such as motivation and job satisfaction than by work volume alone. These findings are in line with research [10] which confirms that increased workload does not necessarily directly contribute to improved performance.

The Influence of the Work Environment on Performance. The work environment has been proven to have a positive and significant effect on the performance of Billman PLN UP3 Samarinda employees. Adequate physical conditions, the implementation of occupational safety and security standards, the quality of social relations between employees, consistent organizational support, and a positive work culture together form a work ecosystem that supports optimal performance. These findings are in line with those that prove that a positive work environment improves task performance directly or through employee commitment. A supportive work environment that includes recognition and career development is closely related to performance through mechanisms *employee engagement*. Physical elements of the office such as lighting and layout have a significant effect on productivity, reinforcing empirical evidence that the design and quality of the work environment are important determinants for the effectiveness of employee performance [14].

The Effect of Job Satisfaction on Performance. Job satisfaction has been proven to have a positive and significant influence on employee performance. Satisfaction formed from job suitability, decent compensation, development opportunities, effective supervision, and harmonious relationships with colleagues encourage employees to work more productively and commit to achieving organizational targets. A significant positive correlation between satisfaction and performance, found that work environment factors and *Reward* which forms satisfaction is the key to the success of organizational performance. *PLS-SEM* confirming that positive culture improves performance through the job satisfaction pathway, adding that employee satisfaction drives *Contextual Performance* that support the effectiveness of the organization more broadly [12].

The Influence of the Work Environment on Job Satisfaction. The work environment has a positive and significant effect on job satisfaction with the highest coefficient value in the model of 0.748. These findings show that physical comfort, safety, quality of social interaction, and a supportive organizational climate cumulatively build employee satisfaction with their work. Physical and non-physical factors of the work environment have a significant effect on employee satisfaction and motivation. Interpersonal trust in the social environment is positively associated with job satisfaction, proving that structural support and *sense of community at work* able to neutralize the negative impact of work demands [12], [15]. A good practice environment correlates with higher satisfaction and lower intention to exit.

The Effect of Workload on Job Satisfaction. The workload has not been shown to have a significant effect on the job satisfaction of Billman employees. This indicates that employees have been able to adapt to the rhythm and volume of work at hand, so that variations in task demands are not the main determinant of their level of satisfaction. These findings are in contrast to research that states that workload has a significant effect on satisfaction [4]. This difference may be due to the peculiarities of the operational context of Billman PLN

UP3 Samarinda, where work experience, standardized procedures, and team support mechanisms that have been formed make employees more resilient to workload pressures.

Mediation of Job Satisfaction on the Effect of Workload on Performance. Job satisfaction has not been shown to significantly mediate the influence of workload on performance, indicating that changes in workload do not result in sufficient shifts in satisfaction to drive performance changes. This condition shows that Billman's performance is more influenced by procedural demands and standard operational standards, so job satisfaction has not played a role as an effective link between the two variables. Mediation of Job Satisfaction on the Influence of the Work Environment on Performance. On the other satisfaction has been proven to positively and significantly mediate the influence of the work environment on the performance of Billman PLN UP3 Samarinda employees. A conducive work environment increases satisfaction, and this satisfaction further drives a real improvement in performance. These findings confirm that organizational investment in improving the quality of the work environment not only has a direct impact on performance, but also creates a psychological mediation pathway through job satisfaction that strengthens and maintains employee productivity in the long term.

V. CONCLUSION

Based on the results of *the Partial Least Square* (PLS) analysis, this study concludes that workload has a positive but not significant effect on the performance and job satisfaction of Billman PLN UP3 Samarinda employees. On the contrary, the work environment has been shown to have a positive and significant effect on performance and job satisfaction. Job satisfaction also has a positive and significant effect on performance. In the mediation test, job satisfaction was not proven to mediate the relationship between workload and performance, but it was proven to significantly mediate the influence of the work environment on employee performance. These findings confirm that the quality of the work environment is the dominant strategic factor that determines the satisfaction and performance of Billman employees at PLN UP3 Samarinda.

The management of PLN UP3 Samarinda is advised to prioritize improving the quality of the work environment as a whole, including aspects of physical condition, work safety, organizational support, and a harmonious work climate, because it has proven to be the main determinants of Billman's employee performance and satisfaction. In addition, special attention needs to be paid to indicators of supervision, promotion, and relationships between colleagues that are still in the medium category. Proportionate and structured workload management also needs to be maintained so that employees can maintain performance stability in a sustainable manner. The next research is suggested to explore moderation variables such as work motivation or *organizational commitment* to enrich understanding of employee performance dynamics.

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