Research Article

The Impact of Workload and Work Environment on Outsourcing Workers' Job Satisfaction at PDAM Surya Sembada Surabaya's Pelayanan Teknis Timur Division

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Abstract: This study examines job satisfaction among outsourcing employees in the Pelayanan Teknis Timur (PTT) Division of PDAM Surya Sembada Surabaya, with particular attention to the effects of workload and work environment. PDAM Surya Sembada Surabaya, a company specializing in the processing and distribution of clean water in Surabaya, frequently encounters job dissatisfaction attributed to excessive workload and suboptimal work conditions. A quantitative research design was implemented, utilizing structural equation modeling (SEM) with SmartPLS software for data analysis. Saturated sampling was applied, resulting in a sample of 57 respondents. The findings indicate that increased workload tends to reduce job satisfaction, while improvements in the work environment are associated with higher job satisfaction.

1. Introduction

In the context of globalization and the increasing intensity of business competition, Human Resources (HR) holds a position as the strategic capital determining organizational success in achieving its goals. The effectiveness of a business entity, as stated by Damayanti (2021), is highly dependent on its capacity to manage the workforce so that they operate with maximal productivity, efficiency, and dedication toward the organization. Well-targeted HR management will consequently produce a harmony of interests between the organization and its employees. An important indicator of this harmony is the degree of job satisfaction, which, according to Handoko (2020), reflects the employees' level of comfort and acceptance concerning their working requirements and environment.

Job satisfaction refers to a positive emotional state resulting from employees' evaluation of their work experiences. (Jufrizen & Pratiwi, 2021). According to Sutrisno (2019), The impact of job satisfaction is markedly divergent. Satisfied employees typically exhibit greater loyalty and improved performance, while dissatisfaction may lead to work-related stress, reduced productivity, and higher rates of absenteeism and turnover. Consequently, organizations must identify and analyze the factors that influence job satisfaction, including internal elements such as workload and external factors such as the work environment.

Workload is a key determinant that explicitly influences the degree of job satisfaction. Referring to Mahawati (2021), workload pertains to the volume of tasks that must be accomplished within a specific time limit, encompassing both cognitive and physical demands. Prastiwi & Egarini (2022) emphasize that an excessive workload risks inducing pressure, fatigue, and a decline in motivation; however, a well-managed workload can actually enhance staff satisfaction and performance outcomes. Furthermore, the condition of the work environment makes a significant contribution.

A work atmosphere that guarantees safety, comfort, and facilitates social relationships is believed by Darmadi (2020) to generate a constructive work climate, which subsequently impacts the increase in employee satisfaction.

This phenomenon is clearly visible at PDAM Surya Sembada Surabaya, which is a Regional Government-Owned Enterprise (BUMD) of the city of Surabaya in the field of clean water supply. Based on internal reports (PDAM Surya Sembada Surabaya, 2025). the job satisfaction level of outsourcing employees in the Pelayanan Teknis Timur (PTT) Division has fluctuated and has not reached the company's target of 90%. The data also shows an increase in absenteeism and employee turnover, indicating an issue with job satisfaction. Outsourcing employees in the PTT Division face a high workload because the number of customer complaints continues to increase yearly, while the number of personnel is limited, and working hours often exceed the provisions of Undang-Undang No. 13 of 2003 concerning Manpower.

The problems outlined previously indicate the importance of maintaining a balance between workload and a conducive work environment in order to preserve the satisfaction of outsourcing employees at PDAM Surya Sembada Surabaya. Based on this phenomenon, the purpose of this study is to examine how workload and workplace conditions affect outsourcing workers' job satisfaction in PDAM Surya Sembada Surabaya's Pelayanan Teknis Timur Division. The findings of this study are anticipated to provide a foundation for managerial consideration in initiatives to enhance the productivity and well-being of outsourcing workers in the context of regional businesses.

2. Literature Review
2.1. Workload

Workload is the total number of tasks that a person must finish in a given amount of time. (Prastiwi & Egarini, 2022). Meanwhile, Mahawati (2021) defines workload as the burden of responsibility, both physically and mentally, imposed on the worker to complete their assignments. It should be noted that excessive workload risks diminishing productivity and triggering job dissatisfaction. Koesomowidjojo (2017) established that indicators of workload encompass the state of the workplace, the efficiency of working time utilization, and the targets that must be attained.

2.2 Work Environment

The work environment is defined as everything around the employee that has the potential to influence the execution of tasks (Darmadi, 2020). According to Latif *et.al.* (2022), a quality work environment can foster a sense of safety, comfort, and support for effective communication. Indicators that shape the work environment include the work atmosphere, relationships among colleagues, and the availability of work facilities (Budiasa, 2021).

2.3 Job Satisfaction

Job satisfaction is a positive emotional attitude towards the job and the working conditions experienced (Handoko, 2020). Factors influencing job satisfaction include salary, promotion, supervision, relationship with colleagues, and the work itself (Sutrisno, 2019). Indicators of job satisfaction include salary, career prospects, work relationships, the work itself, and supervision (Jufrizen & Pratiwi, 2021).

2.4 Research Framework and Hypothesis

Referring to the theoretical foundation from experts and previous research findings, this study's conceptual framework clarifies how workload and the work environment influence employee job satisfaction.
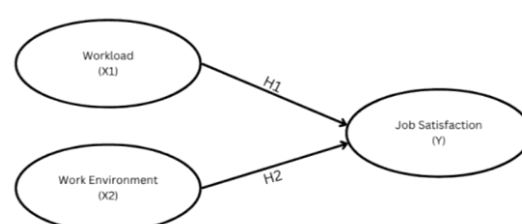

Figure 1. Conceptual Framework

A provisional answer to the research problem formulation, which is composed based on the empirical evidence obtained through the data collection procedure, is known as a hypothesis (Sugiyono, 2020). The hypotheses utilized in this study are formulated as follows:

H1: Workload has a significant negative effect on the job satisfaction of PTT PDAM Surya Sembada Surabaya outsourcing employees.

H2: Work environment has a significant positive effect on the job satisfaction of PTT PDAM Surya Sembada Surabaya outsourcing employees.

3. Method

To confirm the validity of the tested hypothesis, this study uses a survey method and a quantitative approach (Sugiyono, 2020). The 57 outsourcing workers of PDAM Surya Sembada Surabaya's Pelayanan Teknis Timur (PTT) Division comprise the research population. Saturated sampling is the method employed. Three variables are covered by a closed questionnaire with a Likert scale of 1 to 5.

1. Workload (X1): work conditions, working time, and work targets
2. Work Environment (X2): work atmosphere, relationships among colleagues, and work facilities
3. Job Satisfaction (Y): salary, career prospects, colleagues, the work itself, and supervision

With the aid of the SmartPLS 4.0 program, data analysis is carried out using the Structural Equation Modeling (SEM) method, specifically the Partial Least Square (PLS) approach. Validity is evaluated using outer loading and Average Variance Extracted (AVE), while reliability is evaluated using Cronbach's alpha and Composite Reliability (Ghozali & Latan, 2020).

4. Results and Discussion
4.1 Outer Model
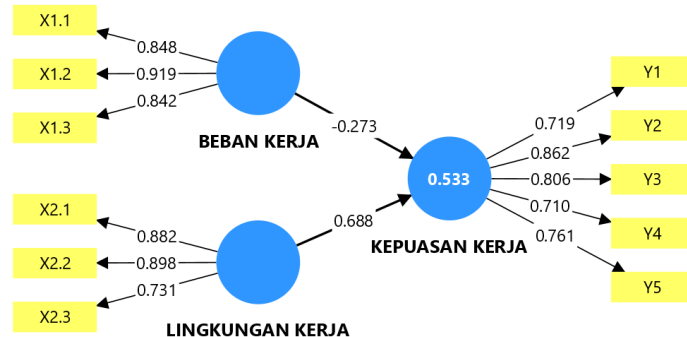
Figure 2. Outer Model (Factor Loading, Path Coefficient, and R-Square)

The magnitude of the factor loading value for each indicator can be seen based on the PLS output above; these values are situated above the arrow that links the variable to its indicator. Additionally, above the arrow line connecting the exogenous and endogenous variables is a list of the path coefficients' magnitudes. Lastly, the R-Square value is visible inside the endogenous variable's (the job satisfaction variable) circle.

4.1.1 Convergent Validity

Table 1. Outer Loading

	Workload (X1)	Work Environment (X2)	Job Satisfaction (Y)
X1.1	0,848		
X1.2	0,919		
X1.3	0,842		
X2.1		0,882	
X2.2		0,898	
X2.3		0,731	
Y1			0,719
Y2			0,862
Y3			0,806
Y4			0,710
Y5			0,761

Source: Data processed by the researcher (2025)

The loading factor values, which show how strongly each indicator and the construct it measures are related, are shown in Table 1. According to the data processing results, all indicators are deemed valid since they meet the predetermined criteria by having loading factor values greater than 0.70 (loading factor > 0.70).

Table 2. Average Variance Extracted (AVE)

	AVE (Average Extracted
Workload (X1)	0,758
Work Environment (X2)	0,706
Job Satisfaction (Y)	0,598

Source: Data processed by the researcher (2025)

The data processing results are displayed in Table 2, where all Average Variance Extracted (AVE) values are greater than 0.50 (> 0.50). This indicates that the measurements met the convergent validity criterion.

4.1.2 Discriminant Validity

Table 3. Cross Loading

	Workload (X1)	Work Environment (X2)	Job Satisfaction (Y)
X1.1	**0,848**	0,036	-0,221
X1.2	**0,919**	-0,004	-0,253
X1.3	**0,842**	0,104	-0,136
X2.1	-0,075	**0,882**	0,641
X2.2	0,045	**0,898**	0,627
X2.3	0,194	**0,731**	0,394
Y1	-0,025	0,590	**0,719**
Y2	-0,181	0,629	**0,862**
Y3	-0,359	0,439	**0,806**
Y4	-0,076	0,480	**0,710**
Y5	-0,304	0,461	**0,761**

Source: Data processed by the researcher (2025)

The cross loading computation output is shown in Table 3, where it is found that all indicators on the Workload (X1), Work Environment (X2), and Job Satisfaction (Y) constructs have loading factors that are larger than the loading factor values of the indicators from the other variables (highlighted).

4.1.3 Reliability

Table 4. Cronbach's Alpha and Composite Reliability

	Cronbach's Alpha	Composite Reliability
Workload (X1)	0,844	0,904
Work Environment (X2)	0,794	0,877
Job Satisfaction (Y)	0,831	0,881

Source: Data processed by the researcher (2025)

Every construct has a Composite Reliability and Cronbach's alpha value greater than 0.70 (Cronbach's alpha / Composite Reliability > 0.70), as Table 4 demonstrates. This implies that when it comes to measuring the constructs, all of the instruments have good reliability. Because of this, the research questionnaire is regarded as trustworthy, and the answers provided by the respondents are regarded as consistent.

4.2 Inner Model

4.2.1 R-Square

The observation of the R^2 value yields the goodness-of-fit model test, also referred to as structural model testing. To determine how much the exogenous (independent) variables can account for the variance in the endogenous (dependent) variable, inner model testing uses the R2 value from the latent variable equation.

Table 5. R-Square

	R-Square
Job Satisfaction	0,533

Source: Data processed by the researcher (2025)

The workload and work environment variables can explain the phenomenon of job satisfaction with a variance percentage of 53.3%, according to Table 5's R^2 (coefficient of determination) value of 0.533. The remaining 46.7% of the contribution can be attributed to factors not included in the study's model.

4.3 Hypothesis Testing

The results of the hypothesis test can be examined by looking at the T-statistic value and coefficient value derived from the inner model shown in the following table:

Table 6. Path Coefficient (Mean, STDEV, T-Values)

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T-Statistic (|O/STDEV|)	P-Values
Workload (X1)	-0,273	-0,279	0,108	2,528	0,012
Work Environment (X2)	0,688	0,689	0,064	10,740	0,000

Source: Data processed by the researcher (2025)

Based on Table 6 above, a hypothesis conclusion can be drawn stating:

1) **Hypothesis 1:** With a path coefficient of -0.273 (negative sign), a T-Statistic of 2.528 > 1.96, and a P-Value of 0.012 < 0.050, workload has a negative and significant impact on the job satisfaction of outsourcing employees in the Pelayanan Teknis Timur (PTT) Division of PDAM Surya Sembada Surabaya. This suggests that employees' job satisfaction decreases as their workload increases.

2) **Hypothesis 2:** With a path coefficient of 0.688, a T-Statistic of 10.740 (> 1.96), and a P-Value of 0.000 (< 0.050) indicate that the work environment has a positive and significant impact on the job satisfaction of outsourcing employees in the Pelayanan

Teknis Timur (PTT) Division of PDAM Surya Sembada Surabaya. This statistical evidence suggests that employees' job satisfaction increases with the quality of the work environment offered by the organization.

The SmartPLS bootstrapping output shown in the following illustration can also be used to examine the T-Statistic value's significance:
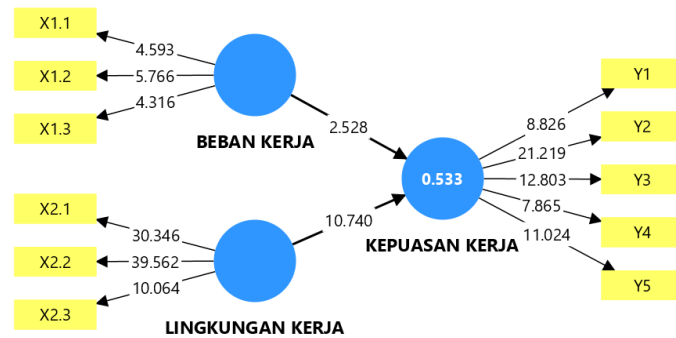

Figure 3. Output Bootstrapping

4.4. Discussion

4.4.1 Influence of Workload on Job Satisfaction

According to the results of the SEM-PLS analysis used to test the first hypothesis, there is a significant negative relationship between the workload variable and job satisfaction of outsourcing employees in the Pelayanan Teknis Timur (PTT) Division of PDAM Surya Sembada Surabaya. A path coefficient of -0.273 (negative sign), a T-Statistic of 2.528 (> 1.96), and a P-Value of 0.012 (< 0.050) demonstrate this. This finding is regarded as representative of the entire population due to the significance of the results. As a result, H1, which claims that "workload has a negative effect on job satisfaction," is approved.

This research finding is consistent with previous research by Rismayani and Heryanda (2024), which validated the existence of a substantial negative impact of workload on job satisfaction. This consistency is also supported by the study of Suroso and Angela (2025), which likewise proved that workload negatively affects job satisfaction. Both references emphasize that an increased burden of duties can significantly reduce job satisfaction. According to Pawetta in (Dwiyana, Sastria, & Kassaming, 2021), suggests that excessive workload can trigger various symptoms that decrease staff job satisfaction. The quality of employee work will subsequently be influenced by that decline in job satisfaction.

In the phenomenon occurring in this study, it is necessary to conduct a re-evaluation concerning the increase in job satisfaction through the distribution of a balanced and fair workload proportionate to the set targets. The company can start by adjusting the employee's qualifications with the position and job description provided. By matching qualifications with the assigned position or task, employees will not feel an excessive workload due to tasks not aligning with the qualifications they possess.

4.4.2 Influence of Work Environment on Job Satisfaction

According to the results of the SEM-PLS analysis for testing the second hypothesis, there is a significant positive relationship between the work environment variable and job satisfaction among outsourcing employees in the Pelayanan Teknis Timur (PTT) Division of PDAM Surya Sembada Surabaya. A path coefficient of 0.688, a T-Statistic of 10.740 (> 1.96), and a P-Value of 0.000 (< 0.050) all support this. The finding is regarded as representative of the entire population because of this noteworthy outcome. As a result, H2, which claims that "work environment has a positive effect on job satisfaction," is approved.

This research finding shows conformity with prior research by Simanullang and Karneli (2024), which validated the existence of a substantial positive impact of the work environment on job satisfaction. Furthermore, the study by Octaviani and Prasada (2024), also supports this finding by proving a significant positive effect. Both studies agree that appropriate work environment conditions have the potential to significantly increase job satisfaction.

The work environment is one of the supporting and important aspects for employees in carrying out their work. Providing a good work environment will give employees a sense of safety and comfort. As a result, employees will feel satisfied with the work they receive, and this can improve employee performance. Through the phenomenon occurring within the company, supported by the results of the pre-survey submitted to the respondents (outsourcing employees in the Pelayanan Teknis Timur (PTT) Division of PDAM Surya Sembada Surabaya), it can be concluded that respondents feel the work environment within the company is not yet capable of supporting work activities. This includes the guarantee of employee safety and security, relationships with colleagues, and the availability of work supporting facilities, which are felt to be inadequate for employees.

5. Conclusion

Based on the testing findings conducted through SEM-PLS analysis aimed at exploring the impact of workload and work environment on the job satisfaction of outsourcing personnel in the Pelayanan Teknis Timur (PTT) Division of PDAM Surya Sembada Surabaya, the following conclusions can be formulated: 1) Workload is proven to play a role in decreasing job satisfaction. Employees who receive excessive workload tend to experience a decrease in their job satisfaction. This finding indicates that an increase in workload can cause an adverse effect, leading to a decrease in the level of job satisfaction. 2) Work environment is proven to play a role in increasing job satisfaction. A work environment that is safe, comfortable, and supportive tends to increase employee job satisfaction. This finding indicates that good work environment conditions can provide an increase in the level of job satisfaction. As an implication resulting from this research, several suggestions that can be considered or utilized as a reference in decision-making are presented below: 1) Based on the research results, the highest influence on the workload variable is found in the working time indicator. The company is advised to manage working time more effectively and adjust it to the amount of work received. The company can also implement a more flexible work scheduling system and consider sufficient rest time. With a proportional arrangement of working time, the job satisfaction level of outsourcing employees is expected to increase, and the risk of performance decrease due to excessive workload can be minimized. 2) Based on the research results, the highest influence on the work environment variable is found in the relationship with colleagues indicator. The company is advised to strengthen interpersonal relationships among employees. The company can organize team building programs, teamwork training, or non-formal activities such as gatherings to build a sense of togetherness. With good working relationships established, the work environment will become more conducive and support the increase in outsourcing employee job satisfaction.

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