

The Influence of Transformational Leadership and Work Environment on Employee Performance Mediated by Motivation at PT HJS

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Abstract

Keywords:

Transformational Leadership;
Work Environment; Work
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Company.

Project-oriented company possess unique characteristics including high work dynamics and uncertainty that require different approaches in understanding employee performance determinants. This study aims to analyze how transformational leadership and workplace environment contribute to employee performance, while also investigating the mediating role of work motivation among employees at PT HJS, a construction and industrial estate development company in Batam, Indonesia. This study employed a quantitative explanatory approach using a census sampling technique involving 100 employees from five operational divisions. Data were collected through structured questionnaires using a 5-point Likert scale and analyzed using SEM-PLS through SmartPLS 4.0. Mediation testing was conducted using specific indirect effects analysis. The findings revealed that transformational leadership ($\beta = 0.158$; $p = 0.263$) and work environment ($\beta = 0.008$; $p = 0.962$) had no significant direct effect on employee performance. However, both factors significantly enhanced work motivation (TL \rightarrow WM: $\beta = 0.431$; $p < 0.001$; WE \rightarrow WM: $\beta = 0.443$; $p < 0.001$), which subsequently improved employee performance (WM \rightarrow EP: $\beta = 0.388$; $p = 0.013$). Mediation analysis confirmed that work motivation fully mediated the relationship between work environment and employee performance and mediated the relationship between transformational leadership and employee performance. These findings enrich Organizational Behavior literature by demonstrating that in project-oriented company contexts, the influence of organizational factors on performance is entirely transmitted through motivational processes, differing from findings in conventional organizations. Practically, management is advised to prioritize motivation enhancement programs as the primary strategy for improving performance of employee.

INTRODUCTION

The complexity of the project and the fierce market competition in the construction industry and regional developers demand the role of visionary leaders and a supportive work system to ensure optimal performance and successful project implementation, so that the company can operate sustainably (Azeem et al., 2020; Dartey-Baah, 2022; Evans et al., 2022; Ni et al., 2020). The characteristics of a project-based company are fundamentally different from a stable and routine corporate organization. Corporate organizations

generally have a fixed structure with standardized workflows and a predictable work environment, so leadership patterns tend to be directive and oriented towards the maintenance of the system that is already running. In contrast, project-based companies face uncertainty and rapid change (Zhang et al., 2023), thus requiring different approaches to leadership and management of the work environment to maintain employee motivation and performance. As a Construction Company and Regional Developer that has been operating for more than 30 years in Batam City, Indonesia, PT HJS carries out project-based business activities which include reclamation, industrial estate development and strategic infrastructure development. This type of industry demands punctuality in completion, technical knowledge and effectiveness of coordination between divisions, especially the managerial division and the project division. There are 5 divisions that are interrelated in the implementation of the company's activities, namely Human Resources, Procurement, Engineering, Finance and Projects (Bumane et al., 2024; Roshdi et al., 2023).

In the publication of the Batam City Central Statistics Agency (BPS) in 2024, it was recorded that the open unemployment rate in Batam was at 7.68% with a labor force participation rate of 69.83%. This data reflects that labor competition in Batam City is relatively fierce, so the Company needs to ensure that its human resources are able to work effectively and produce optimal work results. In its operational activities, PT HJS faces human resource challenges, especially in terms of coordination and communication between the project team and managerial. Differences in work rhythms, information dependence, and lack of communication continuity lead to delays in information flow and decision-making, resulting in an impact on the efficiency and timeliness of project completion. Based on the internal progress report, it is indicated that there will be a delay of 14.19% in July 2025. This condition indicates the need for a leadership role that is able to build psychological engagement, inspire employees to take more initiative, and create a work environment that supports smooth communication across divisions.

The transformational leadership style is seen as relevant in a project-based company because it integrates four main components: the ability of the leader to be an example, inspiring subordinates through a clear vision, encouraging creative thinking, and giving personal attention to employee needs. As stated by (Bass & Avolio, 1994). Through example and trust building, leaders are able to direct employee behavior, then strengthen it with vision delivery and psychological encouragement to achieve common goals. (Lai et al., 2020) explains that transformational leadership styles encourage workers not only to work based on formal instructions, but also to be driven by intrinsic motivation in responding to work challenges proactively.

In addition to leadership, the work environment also has an important role in shaping employee response and performance. The work environment includes physical conditions such as lighting, air circulation, spatial planning, and availability of facilities, as well as non-physical conditions such as relationships between colleagues, social comfort, support from superiors, and a work atmosphere conducive to collaboration (Arifin & Hermina, 2024). In the context of a project-based company, the work atmosphere is becoming increasingly important because the success of a project is highly dependent on smooth coordination and communication between teams working with different rhythms and pressures. (Zhenjing et al., 2022) show that positive working conditions have an impact on employee performance both directly and through other aspects such as increased commitment and work motivation.

Work motivation is an important factor that determines employee readiness to face job dynamics and demands. Dharmawan et al. (2024) explained that strong motivation is able to encourage employees to put in greater effort, maintain perseverance, and maintain commitment to organizational goals, especially

when personal needs are aligned with the demands of the job. In the context of a project-based company, motivation serves as a psychological mechanism that bridges the influence of transformational leadership and the work environment on employee performance improvement (Robbins & Judge, 2023). Previous studies have shown that transformational leadership and the work environment have a positive contribution to performance. Udin et al. (2023) and Lai et al. (2020) found that transformational leadership styles are able to increase employee productivity in organizations that have a stable work system. In addition, Khan et al. (2020) state that transformational leadership can increase employee intrinsic motivation, while Zhenjing et al. (2022) and Arifin & Hermina (2024) show that a conducive work environment plays a role in improving performance in various sectors of the organization.

The novelty of this study is fourfold. First, it examines the mediating role of work motivation in a project-based company context, responding to calls for more contextualized organizational behavior research (Hendri, 2025). Second, it uses a census sampling technique (100 employees across all five divisions), eliminating sampling error and providing complete population representation uncommon in mediation studies. Third, it applies PLS-SEM to test direct and indirect effects simultaneously, methodologically advancing beyond simple regression or bivariate analyses used in prior studies (e.g., Budiono et al., 2021; Pratame & Suana, 2020). Fourth, it identifies and analyzes full mediation patterns where transformational leadership and work environment operate entirely through motivational processes, contributing to theory by demonstrating boundary conditions of direct effects.

However, most previous research has focused on organizations with stable and routine work characteristics, so studies on project-based companies that have high work dynamics, uncertainty, and complex cross-functional coordination demands are still relatively limited. In addition, research that integrates transformational leadership and the work environment simultaneously by placing work motivation as a mediating variable is also still rare, especially in the construction and industrial estate development sectors in Indonesia. Therefore, this study aims to empirically examine the relationship between transformational leadership and the work environment on the performance of PT HJS employees by considering work motivation as a mediating variable. This research is expected to make a theoretical contribution to the development of organizational behavior studies, as well as a basis for practical considerations for company management in designing performance improvement strategies through strengthening work motivation, leadership development, and creating a more supportive work environment.

METHOD

This study was developed through an explanatory quantitative approach with the aim of testing the causal relationship model between research variables. (Sugiyono, 2019) explained that this design is used to prove hypotheses through empirical testing, specifically in identifying how independent variables affect dependent variables. Based on these objectives, this design serves to examine the influence of transformational leadership and work environment conditions on employee work outcomes with motivation as an intervening research subject.

This research group includes all employees of PT. HJS is involved in the company's operations in five main divisions, namely project, finance, procurement, HR, and engineering. The total population is 100 people, all of whom play a role in supporting the implementation of the company's projects and operational activities.

Table 1 Research Population

No	Divided	Quantity	Percentage
1	<i>Project</i>	42 Orang	42%
2	<i>Finance</i>	10 Orang	10%
3	<i>Procurement</i>	17 Orang	17%
4	<i>Human Resources</i>	6 Orang	6%
5	<i>Engineering</i>	25 Orang	25%
Total		100 Orang	100%

The population of this study consists of 100 people which is relatively small and to obtain quality statistical test results, this study was conducted on the entire population without sampling. This is supported by (Hair et al., 2017) who stated that statistically the number of respondents as many as 100 people have met the minimum requirements for various quantitative analyses, including regression analysis and SEM-PLS. In addition, the involvement of all respondents from the five divisions that were the object of the study allowed a comprehensive and holistic picture of the working conditions and performance of employees at PT HJS, so that the research findings can represent the condition of the population directly without the need for additional statistical inference.

The independent variables in this study consisted of two main variables that were suspected to affect employee work motivation and performance, namely Transformational Leadership (X_1) and Work Environment (X_2). The explanation of each variable is as follows:

1. Transformational Leadership (X_1) is a leadership style that inspires, motivates and develops individuals to exceed initial expectations (Dewi et al., 2025).
2. The Work Environment (X_2) in the study (Arifin & Hermina, 2024) is described as the overall condition that is around employees and affects the implementation of work tasks such as cleanliness, lighting, and other supporting factors.

Work Motivation (Z) plays a role as a mediating variable in this study. (Riyanto & Endri, 2021) defines work motivation as internal and external motivation that consciously or unconsciously moves individuals to take actions in achieving goals, so that it becomes an important element in aspects of work and lifestyle. The dependent variable in this study is Employee Performance (Y). (Udin et al., 2023) defines Employee Performance as the level of achievement carried out by employees in realizing the vision and mission of the organization in the work environment related to the effectiveness of achieving goals.

Conceptual and Operational Definitions

Table 2 Operationalization of Research Variables

Variable	Indicator	Source
<i>Transformational Leadership (X_1)</i>		
<i>Work Environment (X_2)</i>		
<i>1. Idealized Influence</i>		(Lai et al., 2020)
<i>2. Inspirational Motivation</i>		
<i>3. Intellectual Stimulation</i>		
<i>4. Individualized Consideration</i>		
<i>1. The Relationship Between Employees and Leaders</i>		(Arifin & Hermina, 2024)
<i>2. Clarity of Working Hours</i>		
<i>3. Effectiveness of Working Hours</i>		
<i>4. Relationships With Co-Workers</i>		
<i>5. Work Atmosphere</i>		
<i>6. Facilities and Infrastructure</i>		

Work Motivation (Z)	Intrinsic Motivation:	(Riyanto et al., 2021)
	1. Good Work Relationship	
	2. Have a Sense of Togetherness	
	3. Participation in Work Activities	
	4. Goal-Setting Involvement	
	5. Task Suitability with Ability	
	6. Extrinsic Motivation Self-Development Opportunities:	
	7. Performance Awards	
	8. Praise From Superiors	
	9. Availability of Health Benefits	
	10. Availability of Sick Leave	
	11. Availability of Transportation Allowance	
12. Availability of Bonus Allowance		
Employee Performance (Y)		
1. Quality of work		
2. Working quantity		
3. Punctuality		
4. Problem Solving		
5. Collaboration		
(Udin et al., 2023)		
6. Initiative and proactive		

To ensure that each indicator on the research variable can be accurately measured, the research instrument was designed in a structured questionnaire format that applied a Likert scale with five levels of response, ranging from a value of 1 representing Strongly Disagree to a value of 5 representing Strongly Agree. The process of compiling this instrument refers to the design of a measuring instrument that integrates variables, dimensions, indicators, and statement items, so that each indicator can be translated into a statement of the nature of operational and quantifiable.

The data of this study was obtained through primary data, namely data collected through a structured questionnaire compiled based on research variable indicators in the form of transformative leadership, work environment, work motivation, and worker performance. The answers obtained from the questionnaire were used as quantitative data for statistical analysis, including validity, reliability, and structural model testing.

Data Analysis

Data processing (SEM-PLS), which was assessed as appropriate for a research model involving direct and indirect relationships and not too large sample sizes (Hair et al., 2019). Before testing the structural model, testing of the measurement model is carried out to ensure that the instrument used meets internal standards of validity and consistency. The convergent validity is seen from the outer loading and Average Variance Extracted (AVE) values, with a minimum AVE limit of 0.50 (Hair et al., 2021). The validity of the discriminant using HTMT, which is stated to be fulfilled when the HTMT value is below 0.90 as recommended by (Henseler et al., 2015). Furthermore, the reliability of the construct was evaluated through Composite Reliability and Cronbach's Alpha with a value of 0.70 as the minimum limit (Sarstedt et al., 2017).

Once the measurement model meets all the criteria, the next stage is the evaluation of the structural model to assess the strength of the relationships between variables. The value of the determination coefficient (R^2) is used to see the magnitude of the variation of the dependent variable that can be explained by the independent variable. Hypothesis testing is carried out

through a bootstrapping procedure with 5,000 subsamples, and an effect is declared significant when the p-value is below 0.05 or the t-statistic exceeds 1.96 (Hair et al., 2019). In addition to direct influence, this study also examined indirect influences through Work Motivation as a mediating variable.

Hypothesis testing was carried out by comparing the p-value to the significance level of 95% ($\alpha = 0.05$). (Hair et al., 2019) explain that the acceptance or rejection of a hypothesis is determined based on the following criteria:

1. If the p-value ≤ 0.05 and the t-value ≥ 1.967 , then H_0 is rejected and H_a is accepted.
2. If the p-value > 0.05 or the t-value < 1.967 , then H_0 is accepted and H_a is rejected.

RESULT AND DISCUSSION

Respondent Characteristics

This study involved all employees of PT HJS as respondents using a saturated sampling technique (census). The total respondents who participated in this study amounted to 100 people spread across the company's five main divisions. The characteristics of the respondents are presented comprehensively in Table 3 which includes demographic aspects, working periods, and the intensity of interaction with superiors.

Table 3 Respondents PT. HJS

Features	Category	Frequency
Age	< 25 Years	16
	25 – 35 Years	40
	36 – 45 Years	26
	> 45 Years	18
Final Education	High School/Vocational School	36
	D3	3
	S1	59
	S2	2
Long Time Working	< 1 Year	12
	1-3 Years	32
	4-6 Years	15
	>6 Years	41
Divided	<i>Engineering</i>	25
	<i>Finance</i>	10
	<i>Human Resources</i>	6
	<i>Procurement</i>	17
	<i>Project</i>	42
Employment Status	Permanent Employees	53
	Contract Officers	47
Interaction with Superiors	Every day	77
	Several times a week	20
	Several Times a Month	1

Source: Processed Data, 2026

From Table 3, there is a respondent profile showing that the majority of PT HJS employees are in the productive age group with the dominance of the age groups of 25-35 years (40%) and 36-45 years (26%). From the educational aspect, most of the respondents have a Bachelor's education background (59%). This characteristic is relevant to the research variable, because employees in the productive age range with an adequate level of education are generally in a career phase driven by achievement, recognition, and the need for career growth and development.

The characteristics of the working period show that 41% of respondents have worked for more than 6 years at PT HJS. This indicates a relatively good employee retention rate as well

as enough work experience to objectively assess the company's leadership and environment. The distribution of respondents by division was dominated by the Project Division (42%) and Engineering Division (25%) This composition is in line with the characteristics of companies engaged in the project-based construction sector, where both divisions have a high level of work pressure and intense cross-functional coordination demands. This condition makes the role of leadership in building employee psychological involvement and creating a work environment that supports effective communication very important for the formation of employee motivation and performance in the field. Another important aspect is the intensity of interaction with the boss, where 77% of respondents interact daily with the direct boss. This condition provides a sufficient experience base for respondents to accurately assess transformational leadership.

Outer Model Test Results

The evaluation of the measurement model was carried out by assessing the convergent validity, discriminant validity, and reliability of the construct. Convergent validity was analyzed through outer loading values and Average Variance Extracted (AVE), while construct reliability was assessed using Composite Reliability (CR). The indicator is declared to meet the criteria if the outer loading value exceeds 0.70 and the AVE is above 0.50. Items with a load between 0.40 and 0.70 can be eliminated if their removal increases the AVE or CR value.

In Table 4. indicates an indicator that does not meet the outer loading criteria ≥ 0.70 , namely in the Work Environment (WE) variable, the WE5 indicator and then Work Motivation (WM) there are 3 indicators that do not meet the criteria, namely WM10, WM11 and WM12. In addition, the AVE value in the Work Motivation variable is 0.44 which indicates that it has not reached the specified value criteria, resulting in the construct not being able to explain more than 50% of the variance of the indicator.

Table 4 Outer Model Test Results (Before Indicator Removal)

Variable	Indicator	Loadings	Cronbach's Alpha	CR	AVE	LIVE
<i>Employee</i>	EP 1	0,736	0,866	0,900	0,602	1,657
	<i>Performance</i>	EP 2				0,836
	EP 3	0,756				1,755
	EP 4	0,732				1,946
	EP 5	0,886				2,880
	EP 6	0,692				1,660
<i>Transformational</i>	TL 1	0,894	0,884	0,920	0,743	2,658
	<i>Leadership</i>	TL 2				0,882
	TL 3	0,850				2,612
	TL 4	0,878				2,959
<i>Work</i>	WE1	0,736	0,802	0,856	0,501	1,442
<i>Environment</i>	WE2	0,751				1,657
	WE3	0,760	1,653			
	WE4	0,690	1,619			
	WE5	0,577	1,362			
	WE6	0,715	1,526			
	<i>Work Motivation</i>	WM1	0,670	0,875	0,898	0,440
WM2	0,704	2,509				
WM3	0,690	2,555				
WM4	0,776	2,525				
WM5	0,756	2,144				
WM6	0,768	2,612				

WM7	0,738	3,728
WM8	0,750	3,138
WM9	0,702	2,364
WM10	0,497	1,562
WM11	0,461	1,521
WM12	0,199	1,414

Source: Smart PLS 4.0 (2026)

Because there is an indicator with an outer loading < 0.70 , elimination is carried out with the deletion information that can increase AVE and CR. The elimination process is carried out iteratively by removing the indicator that has the lowest outer loading value first as presented in Table 5

Table 5 Elimination Indicators

Variable	Indicator	Outer Loading	Remarks
<i>Work Environment</i>	WE5	0,577	Outer loading < 0.70 eliminated increased AVE
<i>Work Motivation</i>	WM10	0,497	Outer loading < 0.70 with AVE construct < 0.50
<i>Work Motivation</i>	WM11	0,461	Outer loading < 0.70 with AVE construct < 0.50
<i>Work Motivation</i>	WM12	0,199	Lowest outer loading value < 0.70

The WM12 indicator shows a very weak contribution to the Work Motivation construct, making it a top priority in elimination. Then WM11, WM 10 that have values below the minimum criteria required to be eliminated to increase AVE in the Work Motivation variable. In the Work Environment variable, the WE5 indicator is eliminated because the value is below the minimum limit and the elimination contributes to the increase in the AVE value of the construct.

The number of indicators eliminated with a proportion of 14.3% is below the maximum limit of 20%. After elimination, the evaluation of the measurement model was carried out again with the results as presented in Table 6 showing that all items had met the requirements of AVE > 0.50 and outer loading > 0.60 . The reliability of the construct was also met with a Composite Reliability value of > 0.70 and Cronbach's Alpha > 0.70 on all variables. The Transformational Leadership variable showed the highest validity with an AVE of 0.743, meaning that 74.3% of the variance of the indicator could be explained by the item.

Table 6 Outer Model Test Results (After Indicator Removal)

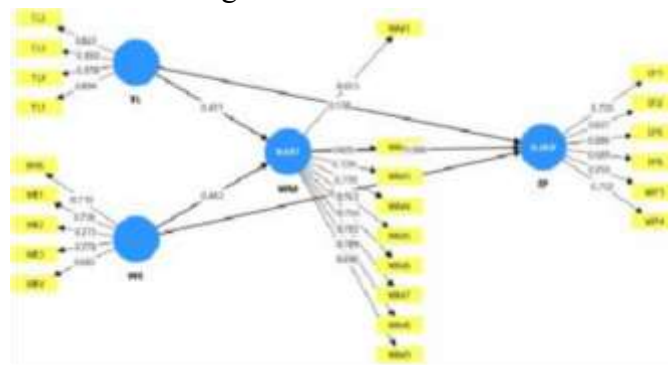
Variable	Indicator	Loadings	Cronbach's Alpha	CR	AVE	LIVE
<i>Employee Performance</i>	EP 1	0,735	0,866	0,900	0,602	1,657
	EP 2	0,837				2,440
	EP 3	0,759				1,755
	EP 4	0,732				1,946
	EP 5	0,886				2,880
	EP 6	0,689				1,660
<i>Transformational Leadership</i>	TL 1	0,894	0,884	0,920	0,743	2,658
	TL 2	0,823				2,032
	TL 3	0,850				2,612
	TL 4	0,879				2,959
<i>Work Environment</i>	WE 1	0,738	0,793	0,856	0,543	1,380
	WE 2	0,773				1,650
	WE 3	0,778				1,653

	WE 4	0,683				1,528
	WE 6	0,710				1,453
Work Motivation	WM1	0,655	0,896	0,915	0,546	2,026
	WM2	0,695				2,356
	WM3	0,729				2,399
	WM4	0,778				2,259
	WM5	0,763				2,038
	WM6	0,756				2,388
	WM7	0,785				3,381
	WM8	0,789				3,045
	WM9	0,690				1,879

Source: Smart PLS 4.0 (2026)

Figure 2 shows that all indicators have met the outer loading criterion value ≥ 0.60 ; AVA ≥ 0.50 ; CR ≥ 0.70 ; Cronbach's Alpha ≥ 0.70 ; and VIF < 5 . Thus, the measurement model is declared valid and reliable.

Figure 2 Outer Model



Source: Smart PLS 4.0 (2026)

The HTMT value in this study shows that the level of discriminative validity between constructs is at an acceptable limit, so that each variable in the research model can be empirically distinguished.

Table 7 shows that all construct pairs have confidence intervals that do not include the number 1 (Henseler et al., 2015) recommending that the HTMT value should be below 0.90 to ensure that each construct has clearly distinguishable characteristics. These findings confirm that the criteria for discriminant validity have been met, so that each construct in the research model has distinctive characteristics and can be clearly distinguished from other constructs.

Table 7 HTMT Test Results

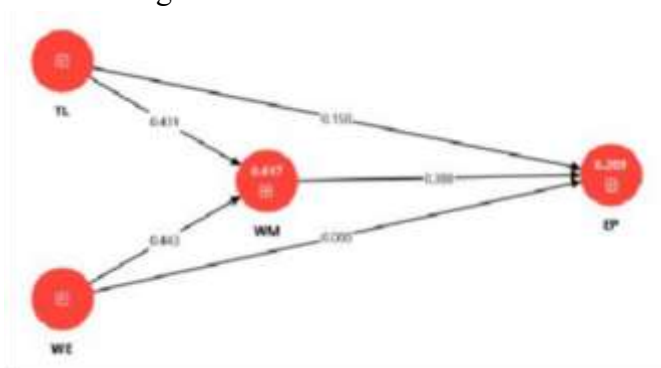
Variable	EP	TL	WE	World Cup
<i>Employee Performance</i>	-	-	-	-
<i>Transformational Leadership</i>	0,483	-	-	-
<i>Work Environment</i>	0,411	0,693	-	-
<i>Work Motivation</i>	0,536	0,771	0,804	-

Inner Model Test Results

The Inner Model test in this study describes the causal relationship between latent variables. The model consists of 2 exogenous variables, namely Transformational Leadership (TL) and Work Environment (WE), Work Motivation (WM) as a mediating variable and Employee Performance (EP) as an endogenous variable. Values on connecting lines

indicates the value of the Path Coefficient (β), while the number within the circle of endogenous variables indicates the value of R-square (R^2) as presented in Figure 3

Figure 3 Inner Model Test Results



Source: Smart PLS 4.0 (2026)

Figure 3 shows an R^2 WM value of 0.617 meaning that 61.7% of the variance can be explained by TL and WE together. This value belongs to the moderate category that indicates good predictive ability. Meanwhile, an R^2 EP value of 0.269 indicates that 26.9% of the variance can be explained by TL, WE & WM. This value is included in the weak to moderate category which indicates that there are still other factors that affect employee performance outside of the research model. Referring to Table 3, there is an assumption that these factors are related to the specific conditions of the project-based Company, where the work results of employees are not only determined by leadership, the company environment and encouragement but are also influenced by technical factors such as project complexity, accuracy of resource allocation and clarity of situational work specifications. There is a division dominance in the composition of respondents which explains that most employees work under dynamic project time pressure so that employee work results are influenced by field conditions, weather and dependence of partners which are variables beyond the scope of this study.

Table 8 Results of the Inner Model Coefficient Path

Variable Relationships	Path Coefficient	Interpretasi
TL → WM	0,431	Positive, moderate
WE → WM	0,443	Positive, moderate
TL → EP	0,158	Positive, weak
WE → EP	0,008	Very weak
WM → EP	0,388	Positive, moderate

Source: Smart PLS 4.0 (2026)

Table 8 shows that WE have the greatest influence on WM, followed by TL. Against EP, WM had the greatest influence, while WE showed the least influence.

Furthermore, the value of f^2 is used to measure how much influence an exogenous variable has on an endogenous variable. Table 9 shows that TL and WE have a moderate effect on WM. WM has a small effect on EP, whereas TL and WE have no direct effect on EP.

Table 9 F2 Test Results

Path	F^2	Interprets
TL → EP	0,016	No effect
TL → WM	0,299	Moderate effects

WE → EP	0,000	No effect
WE → WM	0,316	Moderate effects
WM → EP	0,079	Small effects

Source: Smart PLS 4.0 (2026)

Hypothesis Test

Hypothesis testing was carried out through *bootstrapping* through T-Statistics and P-Value assessments as presented in **Table 10** showed that 3 hypotheses were accepted because they met the T-Statistics & P-Value criteria namely H2, H4 and H5 and 2 hypotheses were rejected because they did not meet the T-Statistics & P-Value criteria namely H1 and H3.

Table 10 Hypothesis Test Results

Variable	b	Mean	STDEV	T Statistics	P Value
TL → EP	0,158	0,144	0,142	1,119	0,263
TL → WM	0,431	0,436	0,073	5,927	0,000
WE → EP	0,008	0,006	0,170	0,047	0,962
WE → WM	0,443	0,440	0,085	5,235	0,000
WM → EP	0,388	0,418	0,157	2,476	0,013

Source: Smart PLS 4.0 (2026)

Mediation Test

In addition to testing direct influences, this study also tested indirect influence through *Work Motivation* as a mediating variable. Testing of mediated effects was carried out by analyzing *specific indirect effects* through a *bootstrapping* procedure with 5,000 subsamples to obtain indirect path coefficients, *t-statistic*, and *p-values* (Hair et al., 2019). The indirect effect is stated to be significant if *the p-value* is < 0.05 or *the t-statistic* > 1.96 as presented in **Table 11**

Table 11 Mediation Test Results

Variable	b	Mean	STDEV	T Statistics	P Value
TL → WM → EP	0,167	0,182	0,074	2,245	0,025
WE → WM → EP	0,172	0,186	0,085	2,021	0,043

Source: Smart PLS 4.0 (2026)

Table 11 shows that WM mediates the relationship between TL and EP. WM also mediated the relationship between WE and EP. Referring to the results of the previous hypothesis test, the direct influence of TL on EP was not significant but the indirect influence through WM was significant. WE did not show a significant direct impact on EP but the indirect effect was significant. In this test, WM plays a role as a full mediator in the two relationships.

Discussion

This design is used to analyze the correlation of transformational leadership and work environment on the work outcomes of workers with work motivation intermediaries as intervening at PT HJS. Based on the results of data analysis, it was found that transformational leadership and work environment do not directly affect the work outcomes of workers. However, these two variables have been shown to be positively and significantly correlated with work motivation, which in turn has a significant correlation with employee work outcomes.

Testing the mediating effect using specific indirect effects analysis showed that work motivation plays a role as a full mediator in the relationship between the work environment and employee performance and also acts as a mediator in the relationship between transformational leadership and employee performance. These findings answer research

questions regarding the correlation mechanism of transformative leadership and the work environment to employee work outcomes in the context of a project-based company.

1. H1: The Influence of Transformational Leadership on Employee Performance

The findings of the statistical analysis showed that transformative leadership was not significantly correlated with worker performance with $(\beta) = 0.158$, Statistics = 1.119, and PValue = 0.263. Because they are not qualified, H1 Transformational Leadership has a significant positive effect on Employee Performance being rejected. These results indicate that transformational leadership has not been able to improve the performance of workers at PT HJS. This result can be explained that in the context of construction and industrial development companies, the influence of transformational leadership requires an intermediary mechanism to be able to improve employee performance. Transformational leaders are indeed able to provide inspiration, vision, and intellectual stimulation to their subordinates, but without strong work motivation as an internal driver, the impact on performance becomes insignificant. In addition, the large proportion of employees with contract status in the composition of PT HJS respondents is also suspected to contribute to this weak direct influence, considering that employees with temporary employment ties tend to have lower psychological involvement in the values and vision transformed by the leader, so that the transformational leadership stimulus is not strong enough to drive performance directly without strengthening motivation first.

These findings are in line with findings (Putri et al., 2025) which found that transformative leadership has a direct but not substantial relationship to employee work outcomes. The study shows that the influence of transformative leadership on employee work outcomes requires an intermediary mechanism in the form of work motivation to be able to have a significant impact. Furthermore, these findings are also supported by the literature presented by (Udin et al., 2023) which states that transformational leadership behaviors, particularly the idealized influence dimension, are not significantly related to the effectiveness of employee behavior. In fact, transformational leadership in some organizational contexts is not able to improve employee performance directly in the absence of mediating variables such as intrinsic work motivation.

However, there are studies that have found a significant direct influence between transformational leadership and employee performance (Jiatong et al., 2022), These differences in results can be explained by different industry contexts and organizational characteristics. As stated by (Putri et al., 2025), transformational leadership that is applied through participatory decision-making, giving direction in the implementation of tasks, and emphasizing the importance of interaction between leaders and employees in achieving common goals, will be more effective when supported by high work motivation from employees. Referring to the condition of PT HJS as a project-based construction company, decision-making that tends to be centralized at the managerial level and limited direct interaction between leaders and operational employees, especially in the project division, can reduce the effectiveness of transformational leadership in directly influencing performance. In this condition, transformational leadership plays more of an indirect role as an indirect influence that first increases work motivation, which then encourages improved employee performance.

2. H2: The Influence of Transformational Leadership on Work Motivation

Statistical analysis indicates that Transformative Leadership is positively and substantially correlated with Work Motivation with $(\beta) = 0.431$, Statistics score = 5.927, and P-Value 0.000. Because it met the criteria, H2 was accepted. These findings prove that leaders

who apply a transformational leadership style are able to significantly increase employee motivation. Transformational leadership characterized by idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration has been proven to be successful in building employees' internal enthusiasm and drive to work better. At PT HJS, leaders who are able to become role models, provide a clear vision of the company's goals, encourage creativity in problem solving, and give personal attention to each employee have succeeded in fostering intrinsic and extrinsic motivation in their employees.

In line with the conclusion (Udin et al., 2023) that transformational leadership is positively and substantially correlated with work motivation, the results explain that leaders are able to drive employee work motivation through the articulation of a clear vision of the future, good attention, a high emotional connection with work, and the creation of comfortable working conditions. Then the findings from (Khan et al., 2020) also found a significant positive relationship between leadership style and work motivation. The design emphasizes that transformational leadership styles have the power to increase psychological empowerment abilities called work motivation. When transformational leaders provide effective support and guidance, employees' self-motivation to be an effective and beneficial part of the organization increases significantly.

In line with that, (Putri et al., 2025) found that transformative leadership is positively correlated and has significance on work motivation. These results state that a good leader of the company can increase employee work motivation. Transformational leaders who make decisions collaboratively with employees, provide direction in the execution of tasks, and emphasize the importance of interaction between leaders and employees in achieving common goals have proven effective in generating work motivation. This conclusion is in line with the theory of organizational behavior put forward by (Robbins & Judge, 2023) with the explanation that transformational leaders tend to encourage their teams to go beyond their personal interests for the good of the organization and are able to influence their employees. Transformational leaders pay attention to the development needs of their employees and can awaken and inspire their employees to put in extra effort to achieve the group's goals.

3. H3: The Effect of Work Environment on Employee Performance

The results of statistical analysis revealed that the Work Environment was not significantly correlated with the performance of workers with a value of $(\beta) = 0.008$, a statistics value of 0.047, and a PValue of 0.962. Because it did not meet the requirements of PValue & Statistics, H3 was rejected.

These findings indicate that a conducive work environment at PT HJS does not directly improve employee performance without a liaison mechanism. In the context of construction and industrial development companies such as PT HJS, the physical and non-physical work environment requires an internalization process through work motivation first before it can affect employee performance output. The nature of work in the construction sector that is structured, project-based, and oriented to technical targets causes employees to not directly respond to the conditions of the work environment in the form of performance improvement, but rather need motivational encouragement as a connecting bridge. This condition is further strengthened by the fact that 42% of project division employees are placed at different project locations and continue to change according to the ongoing project cycle, which is different from stable and consistent office employees, project employees often face changes in the work environment so they tend to lack awareness of the working environment conditions as a factor

that affects performance and the response that is formed more adaptive to technical demands of the project.

The results of this study are different from the findings (Zhenjing et al., 2022) on academic staff which show that in the presence of a positive work environment, employee performance moves in a better direction and positive changes in task performance can be observed. This difference in findings can be explained through the characteristics of different work contexts, where academic staff have higher work autonomy and can directly respond to environmental conditions in the form of performance outputs, this result is contrary to the reality of PT HJS field employees facing a dynamic and non-uniform work environment between project locations. Similarly, these findings also contrast with research (Arifin & Hermina, 2024) which found that the work environment is substantially correlated with employee work outcomes so there is empirical evidence that a more comfortable work environment will maximize employee work outcomes.

This finding is in line with organizational behavior theory (Robbins & Judge, 2023) with the explanation that the organizational environment is one of the situational factors that play a role in influencing employee behavior, but the influence is not always direct. Situational factors such as the work environment often work through psychological mechanisms such as motivation, job satisfaction, or organizational commitment before affecting employee work outcomes. In the context of PT HJS as a construction and industrial development company, a good work environment needs to be transformed into employee work motivation first in order to produce increased performance.

4. H4: The Influence of Work Environment on Work Motivation

The results of statistical analysis showed that the work environment had a direct correlation and was relevant to the work motivation marked with a value (β) = 0.443, the value of Statistics = 5.235, and PValue = 0.000. Since the PValue < 0.05 and the Statistics > 1.96, H4 is accepted. These findings indicate that a structured work environment at PT HJS can significantly generate work motivation. A work environment that includes physical or non-physical aspects has been proven to play a role in increasing employees' internal drive to work better. As a construction and industrial estate development company, the provision of a safe, comfortable and supportive working environment can improve positive psychological conditions in encouraging employees to be more motivated in carrying out their daily tasks.

The findings (Kaviya et al., 2025) also found that the work environment is positively correlated with work motivation, comfortable office conditions can motivate employees to perform well and the existence of smooth communication between superiors and employees can motivate employees in doing employee work because the employee feels recognized and appreciated by the boss. This finding is also supported by research (Budiono et al., 2021) and also found that the work environment is substantially correlated with motivation by showing that in measuring the work environment on motivation, the indicator that has the greatest influence is the physical work environment such as air circulation and smooth communication between superiors and employees in a non-physical work environment so that it can be stated that a good work environment can be an encouragement for employees to perform their obligations above expectations.

Similar results were also revealed by (Arifin & Hermina, 2024) who found that the work environment has a significant effect on motivation, which means that if the environment is

conducive to the workplace, it can affect employee performance, which then has an impact on the organization. Then this result is also in line with the OB theory (Robbins & Judge, 2023) which explains that the work environment is one of the contextual factors that affect employee motivation. Good working conditions include physical and non-physical aspects can affect employees' ability to do their jobs. When employees work in a supportive environment, they tend to feel more comfortable, safe, and valued, which in turn generates both intrinsic and extrinsic motivation to perform better.

5. H5: The Effect of Work Motivation on Employee Performance

The results of statistical analysis showed that the values (β) = 0.388, Statistics = 2.476, and PValue = 0.013. Since the P-Value < 0.05 and the T-Statistics > 1.96, H5 is accepted. These findings reveal that when PT HJS employees have a strong internal drive to work, whether in the form of a need for achievement, recognition, or a sense of belonging, their work results will significantly increase. In the context of construction and industrial estate development companies such as PT HJS operating under the pressure of project deadlines and high quality standards, work motivation becomes the psychological foundation that determines how far employees are willing to go beyond minimum expectations in their roles.

This result is in line with the findings (Ibrahim et al., 2022) which indicate a positive correlation between motivation and performance, in the study it is also emphasized that employees are human beings who are inseparable from doubt and fear, so that motivation, whether intrinsic or extrinsic, can act as a catalyst in influencing work morale into real and measurable performance results. Furthermore, (Tedi & Hidayat, 2023) also confirmed that work motivation is correlated with employee work outcomes through this, it can be seen that work motivation is a variable that clearly proves its relevance in shaping performance. With the motivation of every employee to be able to work hard and have a high morale in achieve high productivity so that it has implications for improving performance both individually and the organization as a whole.

A deeper dimension of this relationship is elaborated by (Nusraningrum et al., 2024) who in his comprehensive study also found that motivation is positively and substantially correlated with employee performance as well explained that this relationship is rooted in the theory of human behavior that includes intrinsic and extrinsic motivation, in which motivational factors such as a sense of doing meaningful work, responsibility, recognition, and career advancement collectively build an individual's motivation to perform better in the workplace. Furthermore, the study confirms that motivation is a critical variable in the overall performance matrix, and employees who have higher levels of motivation consistently show improved performance levels.

In the context of PT HJS which is a Construction Company as well as an industrial estate developer with the demand for cross-functional coordination, punctuality and commitment to strict quality standards, work motivation functions as a psychological element that encourages employees to maintain their intensity throughout the Company's activity cycle. The absence of adequate motivation, technical potential and employee competence will never be fully actualized into performance that can be felt by the organization.

6. H6: Work Motivation Mediation on the Influence of Transformational Leadership on Employee Performance

The results of statistical analysis showed that the value (β) = 0.167, Statistics = 2.245 and PValue = 0.025. Because the PValue < 0.05 and the Statistics > 1.96, H6 was accepted so that

it was confirmed that work motivation succeeded in mediating the relationship between transformational leadership and PT HJS employee performance. Meanwhile in the H1 test, it was found that the direct influence of transformational leadership on performance was not significant. The combination of these two findings showed a non-significant direct influence while an indirect influence through a significant mediating variable. This condition indicates the occurrence of full mediation. This research theoretically reveals the mechanism that explains how and through what pathways transformational leadership plays a role in improving employee performance, namely through increased work motivation as a mediating variable.

Empirically, these findings are in line with research (Hariadi & Muafi, 2022) that shows that work motivation significantly mediates the influence of transformational leadership on employee performance. In the findings, it is explained that transformational leaders facilitate new understandings by increasing employee awareness of problems, thereby fostering inspiration and anticipation to make extra efforts in achieving common goals. This finding is different from the results of a study (Karyono et al., 2023) that found that work motivation mediates the positive and significant correlation of transformational leadership to performance. In the research, it is emphasized that intensity, direction, and perseverance as core elements of motivation function as active mechanisms that link transformational leadership to optimal performance achievements. In the study, it was revealed that the difference in mediation patterns where the direct influence of transformational leadership on performance was also proven to be significant so that the mediation that occurred was partial, while the study found full mediation. These findings indicate that the degree of performance dependence on motivation as a mediator is influenced by specific organizational characteristics, work culture, and complexity of the operational environment. In the context of PT HJS, which is engaged in the construction and industrial estate development sector with high project intensity and complex cross-functional coordination demands, work motivation has proven to have a much more central and irreplaceable role as an intermediate variable compared to the context of government bureaucracy that is the background of the research (Karyono et al., 2023)

(Robbins & Judge, 2023) states that transformational leadership is understood as a leadership style that moves followers by changing values, beliefs, and motivations that do not just provide material instructions or incentives but through 4 dimensions, namely idealized influence, inspirational motivation, intellectual stimulation and individualize consideration to create positive psychological conditions in increasing employee motivation to convert The influence of leaders becomes real and sustainable performance. In the context of PT HJS, the full mediation pattern has strategic managerial implications. The complexity of the Company's activities requires employees to be not only technically competent but also psychologically motivated to make positive and consistent contributions. Transformational leaders are able to inspire people through a clear vision, provide intellectual stimulation in solving work problems and show concern for employees will create a strong driving force.

7. H7: Work Motivation Mediation on the Influence of Work Environment on Employee Performance

The results of the statistical test showed a value of (β) of 0.172 with a T-Statistics of 2.021 and a P Value of 0.043 Because the P-Value was < 0.05 and the T-Statistics > 1.96 , H7 was accepted so that it was confirmed that work motivation was proven to significantly bridge the relationship between the work environment and the work outcomes of PT HJS employees. Meanwhile, in the H2 test, it was found that the direct correlation of the work environment to

employee performance was not significant. The combination of insignificant direct influence and indirect influence through significant mediation variables indicates the occurrence of full mediation.

These findings indicate that the work environment does not directly improve employee work outcomes. The work environment first affects the level of work motivation, and through this increase in motivation, employee performance has a significant increase. Thus, the work environment plays a role as a contextual factor that shapes the psychological condition of employees, while work motivation is the main mechanism that encourages the achievement of optimal performance.

H7's findings are in line with (Sari & Kasmir, 2025) which found that the instant influence of the work environment on employee performance was not significant, but indirect correlations through motivation proved to be positive and significant. In the study, it was emphasized that the impact of the work environment on employee work outcomes occurs through increased work motivation which ultimately contributes to the improvement of employee work. Furthermore, (Marianto & Ketut Surya, 2021) found that the work environment is positively and dominantly correlated with work motivation with the affirmation that a conducive work environment can increase employee motivation, and this increased motivation which then encourages real performance improvements. The study also confirms that motivation is an intermediate variable that is able to comprehensively explain the mechanism of influence of the work environment on employee performance.

Theoretically, this finding is supported by a theory (Robbins & Judge, 2023) that defines motivation as a psychological process that determines the intensity, direction, and perseverance of an individual's efforts in achieving organizational goals. In this perspective, the work environment is understood not as a variable that directly produces performance, but as a contextual condition that affects the extent to which the three motivational elements can be formed and function optimally in employees. A conducive work environment, which includes aspects of safety, physical comfort, harmonious interpersonal relationships, and adequate organizational support, creates psychological conditions that allow employees' effort intensity to increase, direct those efforts consistently in alignment with organizational goals, and maintain perseverance in the face of job challenges.

CONCLUSION

This study found that in a project-based company such as PT HJS, transformational leadership and work environment do not have a direct dominant effect on employee performance. This is due to the characteristics of project work that are dynamic, full of uncertainty, and require complex coordination, so the influence of these two factors on performance must go through internal psychological processes first. The results of the study show that transformational leadership and work environment play a significant role in increasing employee work motivation. Work motivation then becomes the main factor that directly affects employee performance, with intrinsic motivation proving to be more dominant than extrinsic motivation. In addition, work motivation has been shown to mediate a full relationship between transformational leadership and the work environment and employee performance. Therefore, performance improvement in project-based companies needs to be focused on strategies that are able to strengthen employee work motivation. This study has several limitations, such as the limited sample coverage of one company, the cross-sectional

research design, and the value of the performance determination coefficient which is still moderate. Further research is suggested to expand the sample, use longitudinal design, and add other variables relevant to the context of project-based organizations. For PT HJS, the company is advised to increase work motivation through strengthening transformational leadership, performance-based reward systems, career development, competency improvement, and improving communication and work environment.

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