

Research Article

The Influence of Transformational Leadership and Work Environment on Employee Job Satisfaction With Intrinsic Motivation as a Mediating Variable

M. Hapis ^{1*}, Arif Nugroho ², Arif Hidayat ³

¹⁻³ Universitas Pertiwi Indonesia; Email : 24220024@pertiwi.ac.id

* Corresponding Author : 24220024@pertiwi.ac.id

Abstract: This research is motivated by the importance of employee job satisfaction as a strategic factor in increasing productivity and organizational sustainability, especially in companies with high operational complexity. The aim of this study is to analyze the influence of transformational leadership and work environment on employee job satisfaction with intrinsic motivation as a mediating variable. This study uses a quantitative approach with an explanatory research type. Data were collected through a questionnaire survey of employees at the research object and analyzed using multivariate statistical analysis with direct and indirect effect (mediation) testing. The results of the study indicate that transformational leadership and work environment have a positive and significant effect on intrinsic motivation and employee job satisfaction. Intrinsic motivation has also been shown to have a significant effect on job satisfaction and mediates the influence of transformational leadership and the work environment on job satisfaction. These findings confirm that improving job satisfaction is determined not only by structural factors but also by employees' psychological processes. This study concludes that organizations need to implement transformational leadership and create a supportive work environment to strengthen intrinsic motivation and sustainably enhance employee job satisfaction.

Keyword: Employees, Intrinsic Motivation, Job Satisfaction, Transformational Leadership, Work Environment.

1. Introduction

Employee job satisfaction has become a critical issue in contemporary human resource management, particularly in organizations operating in competitive and high-demand environments. Job satisfaction is closely linked to employee performance, organizational commitment, and long-term organizational sustainability (Robbins & Judge, 2019). Employees who experience low job satisfaction tend to demonstrate reduced work engagement, higher turnover intention, and lower productivity.

Empirical data indicate that employee job satisfaction remains a challenge in many organizations. The *Gallup Global Workplace Report* (2023) reports that only 23% of employees worldwide are actively engaged in their work, while the remaining majority experience disengagement that negatively affects organizational performance. In the Indonesian context, workforce surveys and organizational studies also reveal persistent issues related to declining work enthusiasm, limited initiative, and weakened psychological attachment to work, particularly in organizations with high operational complexity. These phenomena indicate that employee job satisfaction problems are not merely caused by structural or material

Received: November 15, 2025

Revised: December 16, 2025

Accepted: January 10, 2026

Published: February 14, 2026

Curr. Ver.: February 14, 2026



Copyright: © 2025 by the authors.
Submitted for possible open access publication under the terms and conditions of the Creative Commons Attribution (CC BY SA) license (<https://creativecommons.org/licenses/by-sa/4.0/>)

factors, but are closely related to leadership practices, work environment conditions, and employees' intrinsic motivation.

Previous studies suggest that leadership style and work environment are key organizational factors influencing employee job satisfaction. Transformational leadership, characterized by vision, inspiration, intellectual stimulation, and individualized consideration, has been shown to positively influence employees' psychological states and work attitudes (Bass & Avolio, 1994). In addition, a supportive work environment both physical and psychosocial—plays an important role in fostering employees' comfort, well-being, and positive work experiences (Sedarmayanti, 2017; Robbins & Judge, 2019).

Furthermore, intrinsic motivation is recognized as a critical psychological mechanism that explains how leadership and work environment affect job satisfaction. According to Herzberg's Two-Factor Theory, intrinsic motivation arises from factors such as achievement, recognition, responsibility, and opportunities for personal growth (Herzberg et al., 1966). Employees who are intrinsically motivated tend to perceive their work as meaningful, which leads to higher levels of job satisfaction. Although numerous studies have examined the relationships between transformational leadership, work environment, intrinsic motivation, and job satisfaction, empirical findings regarding the mediating role of intrinsic motivation remain inconsistent, particularly within the Indonesian organizational context. Moreover, limited empirical research has simultaneously examined these variables using a mediation model in organizations with high operational demands. Therefore, this study aims to analyze the influence of transformational leadership and work environment on employee job satisfaction, with intrinsic motivation serving as a mediating variable. This research was conducted in a private company in Indonesia, which is anonymized for publication purposes to maintain organizational confidentiality.

Based on the above phenomena and theoretical considerations, this study addresses the following research questions:

Do transformational leadership and work environment influence employees' intrinsic motivation?

Does intrinsic motivation influence employees' job satisfaction?

Does intrinsic motivation mediate the relationship between transformational leadership and employee job satisfaction?

Does intrinsic motivation mediate the relationship between work environment and employee job satisfaction?

Accordingly, the purpose of this study is to analyze the direct and indirect effects of transformational leadership and work environment on employee job satisfaction, with intrinsic motivation serving as a mediating variable.

2. Preliminaries or Related Work or Literature Review

Transformational Leadership

Transformational leadership is a leadership approach that emphasizes the leader's ability to transform the values, attitudes, and motivations of followers so that they transcend personal interests for the sake of organizational goals (Burns, 1978; Bass, 1985). Bass and Avolio (1994) explain that transformational leadership consists of four

main dimensions: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. These four dimensions represent the leader's role as a moral role model, a source of inspiration, a driver of creativity, and a supporter of individual employee development. Transformational leadership in this study is conceptualized based on the Full Range Leadership Theory proposed by Bass (1985) and operationalized using the Multifactor Leadership Questionnaire (MLQ) developed by Bass and Avolio. The MLQ is one of the most widely validated instruments for measuring transformational leadership and consists of four core dimensions: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration (Avolio & Bass, 1991).

Work Environment

The work environment encompasses all physical and non-physical conditions that affect employees in carrying out their work (Sedarmayanti, 2017). Robbins and Judge (2019) distinguish the work environment into the physical environment, such as layout, lighting, and work facilities, and the non-physical or psychosocial environment, which includes interpersonal relationships, communication, and organizational climate. A high-quality work environment can create a sense of safety, comfort, and psychological support for employees. Research shows that a conducive work environment contributes to increased motivation and job satisfaction, whereas a less supportive work environment can lead to stress, fatigue, and decreased work engagement (NitiseMITO, 2010; Robbins & Judge, 2019). Therefore, the work environment is understood as a strategic factor that continuously affects employees' psychological conditions and work attitudes. Job satisfaction refers to an individual's overall affective evaluation of their job experiences. In this study, job satisfaction is measured using a multidimensional approach that includes satisfaction with the nature of work, supervision, relationships with co-workers, pay, promotion opportunities, and overall job conditions. This approach reflects employees' holistic evaluation of their work situation.

Intrinsic Motivation

Intrinsic motivation refers to motivation driven by internal satisfaction rather than external rewards. Herzberg's Two-Factor Theory explains that intrinsic motivation arises from factors such as achievement, recognition, responsibility, and personal growth. Employees with high intrinsic motivation tend to demonstrate higher engagement and job satisfaction. Several studies indicate that transformational leadership and a supportive work environment can enhance employees' intrinsic motivation, which in turn impacts increased job satisfaction (Siregar, 2020; Putra, 2022). Thus, intrinsic motivation is often positioned as a mediating variable that explains the mechanism of organizational factors' influence on employees' work attitudes.

Job Satisfaction

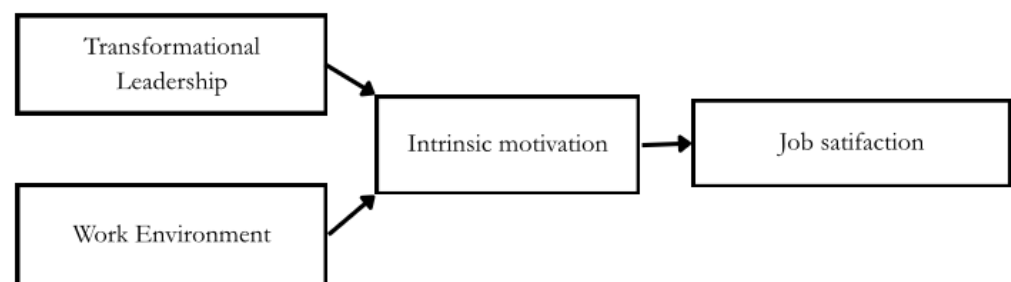
Job satisfaction is defined as a positive emotional state resulting from an individual's evaluation of their job (Avolio, Bass & Jung). Employees with high levels of job satisfaction tend to show loyalty, better performance, and lower intentions to leave the organization. Job satisfaction is influenced not only by material factors but

also by psychological aspects such as leadership, work environment, and intrinsic motivation.

Previous studies have confirmed that transformational leadership and the work environment significantly affect job satisfaction, both directly and through the mediating role of intrinsic motivation (Wulandari & Hidayat, 2021; Rahayu, 2023). Therefore, a comprehensive understanding of the relationships between these variables is important in efforts to improve employee well-being and productivity.

Research Model

This study is developed based on transformational leadership theory, work environment theory, and motivation theory. The proposed research model explains the relationships among transformational leadership, work environment, intrinsic motivation, and employee job satisfaction. In this model, transformational leadership and work environment are positioned as exogenous variables. Intrinsic motivation functions as a mediating variable that explains the psychological mechanism through which leadership and work environment influence employee job satisfaction. Job satisfaction is positioned as the endogenous variable. Transformational leadership and work environment are hypothesized to have direct effects on intrinsic motivation and job satisfaction. In addition, intrinsic motivation is expected to mediate the relationship between transformational leadership, work environment, and job satisfaction. The conceptual research model is illustrated in Figure 1.



Based on theoretical and empirical studies, this research proposes a conceptual model in which transformational leadership and work environment function as exogenous variables, intrinsic motivation acts as a mediating variable, and job satisfaction serves as the endogenous variable. Transformational leadership and work environment are hypothesized to directly influence intrinsic motivation and job satisfaction. Furthermore, intrinsic motivation is expected to mediate the influence of transformational leadership and work environment on job satisfaction, explaining the psychological mechanism underlying these relationships.

Hypothesis Development

Transformational Leadership and Intrinsic Motivation

Transformational leadership emphasizes vision, inspiration, intellectual stimulation, and individualized consideration, which encourage employees to internalize organizational goals and experience meaningful work (Bass & Avolio, 1994). Such leadership behaviors enhance employees' sense of autonomy and

competence, which are core elements of intrinsic motivation. Empirical studies confirm that transformational leadership positively influences intrinsic motivation (Breevaart & Bakker, 2021; Li et al., 2022).

H1: Transformational leadership has a positive effect on intrinsic motivation.

Work Environment and Intrinsic Motivation

A supportive work environment provides psychological safety, comfort, and positive social interactions, which foster employees' enthusiasm and internal drive to perform their tasks. According to work environment theory, both physical and psychosocial workplace conditions play an important role in shaping employees' intrinsic motivation (Sedarmayanti, 2017). Previous studies have found that a conducive work environment significantly enhances intrinsic motivation (Putri & Nugroho, 2021).

H2: Work environment has a positive effect on intrinsic motivation.

Transformational Leadership and Job Satisfaction

Transformational leaders create trust, provide meaningful direction, and recognize individual contributions, which enhance employees' emotional attachment to their jobs. These leadership behaviors positively influence employees' job satisfaction (Bass & Avolio, 1994; Top et al., 2020).

H3: Transformational leadership has a positive effect on job satisfaction.

3. Method

This study employs a quantitative approach with an explanatory research design, aiming to explain causal relationships among variables through hypothesis testing. The research method used is a survey, with the research subjects consisting of employees of the research object (organization name anonymized for publication purposes). To ensure construct validity, all measurement indicators used in this study were adopted and adapted from well-established and widely recognized instruments in prior research. Transformational leadership was measured using the Multifactor Leadership Questionnaire (MLQ) developed by Dong I Jong (2001). Work environment indicators were adapted from Sunhwa Shin (2023), covering both physical and psychosocial aspects of the workplace. Intrinsic motivation was measured based on Self-Determination Theory (Huiwen Li et al.). Job satisfaction was measured using the Job Satisfaction Survey (JSS) developed by Rajak & Maulabakhs (2015). The operational definitions, dimensions, and measurement indicators of each variable are presented in Table 1.

Table 1. Research Variables and Measurement Indicators.

Variable	Dimension	Indicator	Source
Transformational Leadership	Idealized Influence (Charisma)	- Instills pride in others for being associated with the leader	Bruce J. Avolio (2001) et al
		- Goes beyond self-interest for the good of the group	
		- Acts in ways that build others' respect	
		- Displays a sense of power and confidence	
	Inspirational Motivation	- Is admired, respected, and trusted	Bruce J. Avolio (2001) et al
		- Articulates a compelling vision of the future	
		- Talks optimistically about the future	
		- Expresses confidence that goals will be achieved	
	Intellectual stimulation	- Provides meaning and challenge to work	Bruce J. Avolio (2001) et al
		- Re-examines critical assumptions to question their appropriateness	
		- Seeks differing perspectives when solving problems	
		- Encourages creativity and innovation	
	Individualized consideration	- Encourages rethinking of ideas that have never been questioned	Bruce J. Avolio (2001) et al
		- Spends time teaching and coaching	
		- Treats others as individuals rather than just members of a group	
		- Considers individual needs, abilities, and aspirations	
		- Helps others develop their strengths	

Work Environment	Physical Gratification	- Physiological Needs	Sunhwa Shin & Eun-Hye Lee (2023)
	Psychological Stability	- Positive Emotional State And Sense Of Appreciation At Work.	Sunhwa Shin & Eun-Hye Lee (2023)
	Independt Copentency	Depicts Independence, Responsibility, And Professional Development	Sunhwa Shin & Eun-Hye Lee (2023)
	Collaborative Relationship	Assess The Quality Of Teamwork, Collaboration, And Interpersonal Relationships.	Sunhwa Shin & Eun-Hye Lee (2023)
	Stuctural Suport	Assess Organizational Support, Policies, And Institutional Resources.	Sunhwa Shin & Eun-Hye Lee (2023)
Intrinsic Motivation	External Regulation – Social	- Appreciation received from patients and the community - Responsibility toward the work team - Recognition and appreciation from supervisors	Huiwen Li et al
	External Regulation – Economic	- Job-related benefits - Ability to provide for the family - Financial security provided by the job - Earning income - Satisfaction with established working hours	Huiwen Li et al
	Working Hours	Suitability of working hours to workload Working time management in the organization	Abdul Rajak & Rahelaa Maulabakshs (2015)
Job Satisfication		- Feeling safe at work	
	Job Safety and Security	Job security guarantee Continued employment assurance	Abdul Rajak & Rahelaa Maulabakshs (2015)
	Relationship with Co-workers	- Teamwork within the organization Willingness of coworkers to help when needed	Abdul Rajak & Rahelaa Maulabakshs (2015)

	Level of trust among employees	
	Harmonious social relationships in the workplace - Recognition of employee performance	
Esteem Needs	Opportunities for competency development	Abdul Rajak & Rahelaa
	Opportunities for training and career development	Maulabakshs (2015)
	Feeling appreciated by the organization Management support for employees	
	Clarity of information from superiors	
Top Management	Realistic work expectations from superiors	Abdul Rajak & Rahelaa
	Supervisors' trust in employees	Maulabakshs (2015)
	Management involvement in decision-making	

The indicators used in this study were adapted from established theoretical and empirical literature. The referenced studies served as sources for measurement indicators rather than as research models or empirical contexts. Therefore, this study does not replicate previous research but adopts validated indicators to measure the constructs under investigation.

Measurement Instruments

Transformational leadership was measured using the Multifactor Leadership Questionnaire (MLQ) developed by Bass and Avolio (1994), which consists of four dimensions: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. Work environment was measured using indicators adapted from Shin et al. (2012), which cover both physical and psychosocial aspects of the workplace. Intrinsic motivation was measured based on Self-Determination Theory (Ryan & Deci, 2000) and adapted from the scale developed by Li et al. (2022), focusing on enjoyment of work and internal satisfaction derived from task accomplishment. Job satisfaction was measured using the Job Satisfaction Survey (JSS)

developed by Spector (1997). All items were measured using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

4. Results and Discussion

Research Results

The research was conducted by processing data from questionnaires distributed to respondents. The data were analyzed descriptively and inferentially using statistical software and SmartPLS. Descriptive analysis illustrates the characteristics of the respondents as well as the tendencies of responses to the research variables, while inferential analysis tests the relationships between variables in the research model.

Table 2. Characteristics of Respondents Based on Gender.

Gender	Number	Percentage (%)
Men	141	60,0
Women	94	40,0
Total	235	100

Based on Table 1, this study involved 235 respondents, consisting of 141 men (60.0%) and 94 women (40.0%). This distribution shows a dominance of male respondents, which may reflect the demographic composition of the workforce at the research site. However, the proportion of women at 40.0% ensures adequate gender variation, making the data sufficiently representative of the general conditions of the respondents.

Transformational leadership was measured using the Multifactor Leadership Questionnaire (MLQ) developed by Bass and Avolio, which has been extensively validated in leadership research. Job satisfaction was measured using a multidimensional scale adapted from . Intrinsic motivation indicators were adapted from Herzberg's motivation theory.

Methodologically, this composition supports the external validity of the research by providing diverse perspectives, allowing for a more objective analysis of the influence of transformational leadership and the work environment on motivation and job satisfaction. In addition, these results can serve as a basis for inclusive managerial policies and generalization within the context of the organization studied.

The characteristics of respondents based on age are presented to understand the age distribution of respondents involved in the study. Age is one of the demographic factors that can influence perspective, level of maturity, work experience, as well as individual attitudes toward leadership, work environment, work motivation, and job satisfaction.

Table 3. Characteristics of Respondents Based on Age.

Old	Number	Perscentage (%)
≤ 25	38	16,2
26 – 35	96	40,9
36 – 45	67	28,5
> 45	34	14,4
Total	235	100

Based on Table 2, this study involved 235 respondents with the following age distribution: 26–35 years old (96 people, 40.9%), 36–45 years old (67 people, 28.5%), ≤25 years old (38 people, 16.2%), and >45 years old (34 people, 14.4%). The dominance of the 26–35 age group indicates that the majority of respondents are in their productive phase, with high expectations regarding leadership and the work environment. The age group of 36–45 years contributes mature experience, while the group ≤25 years represents the early stage of a career, and those over 45 years provide a comprehensive perspective from extensive experience. This age diversity ensures data representativeness, allowing for objective analysis of the impact of transformational leadership and the work environment on motivation and job satisfaction, as well as supporting the generalization of results in an organizational context. Respondent characteristics based on education level are presented to understand the educational background of respondents who are the subjects of the study. Education level is an important factor that can influence thinking patterns, analytical abilities, and individuals' understanding of organizational policies, leadership, and work environment conditions.

Table 4. characteristics of Respondents Based on Education Level.

Education Level	Amount	Percentage (%)
Senior High School	52	22,1
Diploma (D3)	43	18,3
bachelor's degree (S1)	112	47,7
Postgraduate (S2)	28	11,9
Total	235	100

Based on Table 3, this study involved 235 respondents with the following distribution of education levels: Bachelor's degree (S1) with 112 people (47.7%), Senior High School/Vocational High School (SMA/SMK) with 52 people (22.1%), Diploma (D3) with 43 people (18.3%), and Master's degree (S2) with 28 people (11.9%). The dominance of respondents with a Bachelor's degree (S1) indicates adequate ability to understand the research instruments, allowing for a rational assessment of transformational leadership and the work environment.

The SMA/SMK and D3 groups contribute operational perspectives, while the Master's degree (S2) group provides deeper insights into managerial concepts. This educational diversity ensures data representativeness, supporting a comprehensive analysis of the influence of research variables on work motivation and satisfaction, as well as the generalization of results in an organizational context. The characteristics of respondents based on length of service are presented to determine the level of work experience of the respondents who are the subjects of the study. Length of service is an important indicator that reflects how long an individual has been involved in an organization, thus influencing their understanding of work culture, leadership systems, and workplace conditions.

Table 5. Characteristics of Respondents Based on Length of Service.

Length of Service	amount	Percentage (%)
≤ 5 Years	61	26,0
6 – 10 Years	84	35,7
11 – 15 Years	55	23,4
> 15 Years	35	14,9
Total	235	100

Based on Table 4, the number of respondents in this study was 235 people with varying lengths of service. The largest group of respondents fell within the 6–10 year range, totaling 84 people (35.7%), followed by respondents with ≤ 5 years of service totaling 61 people (26.0%), 11–15 years of service totaling 55 people (23.4%), and more than 15 years of service totaling 35 people (14.9%). The dominance of respondents with 6–10 years of service indicates that most respondents have relatively mature work experience and are therefore able to provide relatively objective assessments of transformational leadership and the work environment. Meanwhile, respondents with ≤ 5 years of service represent employees who are still in the adaptation phase, while respondents with 11–15 years of service and more than 15 years of service reflect employees with extensive experience and a broader perspective. Descriptive statistics are used to understand the general overview of respondents' answers to each research variable, measured using a five-point Likert scale. The following are the results of the descriptive statistical analysis in this study.

Table 6. Results of Descriptive Statistical Analysis.

Variabel	N	Min	Max	Mean	Std. Dev
Transformational Leadership	235	1	5	4,12	0,56
Work Environment	235	1	5	4,05	0,60
Intrinsic motivation	235	1	5	4,18	0,54
Job Satisfaction	235	1	5	4,10	0,58

Based on the descriptive statistics table, all variables have an average value (mean) above 4.00. This indicates that respondents tend to give high ratings for transformational leadership, work environment, intrinsic motivation, and job satisfaction. The relatively small standard deviation values indicate that the respondents' answers are fairly homogeneous. Based on the descriptive analysis results, it shows that the conditions of transformational **leadership and work** environment are in the good category, followed by high levels of intrinsic motivation and job satisfaction.

Table 7. Normality Test Results.

Variabel	Asymp. Sig. (2-tailed)	Keterangan
Transformational Leadership	0,086	Normal
Work Environment	0,072	Normal
Intrinsic motivation	0,091	Normal
Job Satisfaction	0,064	Normal

Based on Table 4.2, this study involved 235 respondents with the following age distribution: 26–35 years old (96 people, 40.9%), 36–45 years old (67 people, 28.5%), ≤25 years old (38 people, 16.2%), and >45 years old (34 people, 14.4%). The dominance of the 26–35 age group indicates that the majority of respondents are in their productive phase, with high expectations regarding leadership and the work environment. Thus, the data for all research variables can be stated to be normally distributed. Meeting this normality assumption indicates that the research data is suitable for analysis using parametric statistical techniques, such as linear regression analysis and hypothesis testing based on t-values. In addition, this condition also strengthens the validity of the results of further analyses conducted, whether using a regression approach or structural analysis with SmartPLS as the main analysis tool. Therefore, it can be concluded that the normality assumption in this study has been fulfilled, allowing the data analysis process to proceed to the next stage without any violations of fundamental statistical assumptions.

Table 8. Heteroscedasticity Test Results.

Variabel Independen	Sig.	Descrption
Transformational Leadership	0,214	No heteroskedasticity occurred
Work Environment	0,187	No heteroskedasticity occurred
Intrinsic motivation	0,243	No heteroskedasticity occurred

Based on Table 7, it can be seen that all independent variables in this study have significance values greater than 0.05. The transformational leadership variable has a significance value of 0.214, the work environment variable 0.187, and the intrinsic motivation variable 0.243. These significance values greater than 0.05 indicate that there is no significant effect of the independent variables on the absolute residual values. In other words, the residual variance is constant across different levels of the independent variables. Convergent validity is assessed based on the outer loading values and the Average Variance Extracted (AVE).

Table 9. Outer Loading.

Variabel	Rentang Outer Loading	Description
Transformational Leadership	0,73 – 0,89	Valid
Work Environment	0,72 – 0,87	Valid
Work Motivation	0,75 – 0,90	Valid
Job Satisfaction	0,74 – 0,88	Valid

Based on Table 9, all indicators for each research variable have outer loading values above the minimum threshold set. The transformational leadership variable has outer loading values ranging from 0.73 to 0.89, the work environment variable ranges from 0.72 to 0.87, the work motivation variable ranges from 0.75 to 0.90, and the job satisfaction variable ranges from 0.74 to 0.88.

Table 10. AVE Values.

Variabel	AVE	Description
Transformational Leadership	0,64	Valid
Work Environment	0,61	Valid
Work Motivation	0,67	Valid
Job Satisfaction	0,63	Valid

Based on Table 4.10, all variables have AVE values above 0.50, namely transformational leadership at 0.64, work environment at 0.61, work motivation at 0.67, and job satisfaction at 0.63. These values indicate that each construct is able to explain more than 60% of the variance of the indicators, so the indicators used have a good representation of the latent constructs. In addition, meeting the AVE value indicates that measurement errors are relatively small and the quality of the measurement instrument is considered good. Thus, all constructs have met the convergent validity criteria and the measurement model is eligible to proceed to the next stage of analysis.

Discriminant validity aims to ensure the conceptual and empirical differences between constructs in a research model. Discriminant validity testing is conducted using the Heterotrait–Monotrait Ratio (HTMT), which is recommended in SEM-PLS analysis because it is more sensitive compared to the Fornell–Larcker criterion. The decision-making criterion states that an HTMT value < 0.90 indicates good discriminant validity, whereas an HTMT value ≥ 0.90 indicates overlap between constructs.

Table 11. Value HTMT.

Variabel	Transformational Leadership	Work Environment	Intrinsic motivation
Transformational Leadership	–	0,71	0,68
Work Environment	0,71	–	0,73
Intrinsic motivation	0,68	0,73	–

Based on Table 11, all HTMT values between constructs are below the maximum threshold of 0.90. The HTMT value between transformational leadership and work environment is 0.71, between transformational leadership and work motivation is 0.68, and between work environment and work motivation is 0.73.

These values indicate that the correlations between different constructs (heterotrait) are not higher than the correlations of indicators within the same construct (monotrait). This suggests that each construct in the research model is clearly distinct and does not overlap empirically. Based on the results of the discriminant validity test using HTMT, it can be concluded that all constructs in this study have met the criteria for good discriminant validity. Thus, the variables of transformational leadership, work environment, and work motivation are conceptually and empirically distinct constructs.

In this study, reliability testing was conducted using two main indicators in PLS-SEM analysis, namely Cronbach's Alpha and Composite Reliability. A construct is considered reliable if it has Cronbach's Alpha and Composite Reliability values greater than 0.70.

Table 12 Construct Reliability.

Variabel	Cronbach's Alpha	Composite Reliability	Keterangan
Transformational Leadership	0,94	0,95	Reliabel
Work Environment	0,93	0,94	Reliabel
Work Motivation	0,92	0,94	Reliabel
Job Satisfaction	0,93	0,94	Reliabel

Based on Table 12, all research variables have Cronbach's Alpha and Composite Reliability values that are well above the minimum threshold of 0.70. The transformational leadership variable has a Cronbach's Alpha of 0.94 and a Composite Reliability of 0.95, indicating a very high level of internal consistency. The same is also shown by the work environment, work motivation, and job satisfaction variables, all of which have reliability values above 0.90. Based on the results of reliability testing using Cronbach's Alpha and Composite Reliability, it can be concluded that all constructs in this study are considered reliable. Thus, the research instruments have met the internal consistency requirements and are suitable for use in further analysis using SmartPLS.

Table 13. Path Coefficient.

Relationship	Path Coefficient
Transformational Leadership → Work Motivation	0,42
Work Environment → Work Motivation	0,38
Work Motivation → Job Satisfaction	0,40

Based on Table 13, all the relationships between latent variables in the research model have positive path coefficients, indicating a unidirectional relationship between the variables. The effect of transformational leadership on work motivation has a coefficient of 0.42, while the effect of the work environment on work motivation is 0.38. This indicates that transformational leadership and a conducive work environment play an important role in enhancing employees' work motivation. Furthermore, transformational leadership has a positive effect on job satisfaction with a path coefficient of 0.30, while the work environment's effect on job satisfaction has a coefficient of 0.26, which is the smallest influence among the tested paths. Nevertheless, both variables still contribute to shaping employee job satisfaction. As for work motivation on job satisfaction, it shows a path coefficient.

Table 14. Correlation Coefficients Between Variables.

Relations	Koefisien Korelasi	Kategori
Transformational Leadership → Work Motivation	0,71	Strong
Work Environment → Work Motivation	0,68	Strong
Work Motivation → Job Satisfaction	0,73	Strong

Based on Table 14, all pairs of variables in this study have positive correlation coefficients in the strong category. The relationship between transformational leadership and work motivation shows a coefficient of 0.71, while the relationship between work environment and work motivation is 0.68, indicating a strong link between leadership factors and the work environment with employee motivation. In this study, the interpretation of the R-Square strength refers to the general criteria, namely an R^2 value of 0.67 or higher is categorized as strong, a value around 0.33 as moderate, and a value around 0.19 as weak..

Table 15. Value R-Square.

Variabel Endogen	R^2	Category
Work Motivation	0,66	Strong
Job Satisfaction	0,73	Strong

Based on Table 15, the work motivation variable shows an R-Square value of 0.66, which means that 66% of its variation can be explained by transformational leadership and the work environment, while the remaining 34% is influenced by other factors such as

individual characteristics, reward systems, organizational culture, and external factors. The variable of job satisfaction has an R-Square of 0.73, with 73% of its variation explained by transformational leadership, work environment, and work motivation, and 27% by other variables outside the model. The results of the determination coefficient test show that the research model has a strong explanatory power for work motivation and job satisfaction, making it suitable for hypothesis testing and research conclusions. The decision criteria in the t-test are: if the t-statistic > 1.96 and the p-value < 0.05 , then the influence between variables is significant and the hypothesis is accepted; conversely, if the t-statistic ≤ 1.96 or the p-value ≥ 0.05 , the hypothesis is rejected.

Table 16. t-Test Results.

Relations	t-statistic	p-value	Decision
Transformational Leadership → Work Motivation	8,92	0,000	Accepted
Work Environment → Work Motivation	7,85	0,000	Accepted
Work Motivation → Job Satisfaction	8,67	0,000	Accepted

Based on the SmartPLS bootstrapping method, it can be concluded that all relationships between variables in the research model have a positive and statistically significant effect. Thus, all proposed research hypotheses are declared accepted. These results indicate that transformational leadership and the work environment not only have a direct impact on job satisfaction but also indirectly affect it through intrinsic motivation as an intervening variable

Discussion

This discussion aims to interpret the research results obtained through quantitative analysis using SmartPLS, supported by the results of follow-up interviews. The discussion connects empirical findings with relevant theories and previous research results to provide a comprehensive understanding of the relationships among the variables studied. This study examines the influence of transformational leadership and work environment on intrinsic motivation and job satisfaction, both directly and indirectly. The test results indicate that all proposed hypotheses are accepted, suggesting that the research model has strong empirical support.

The analysis results indicate that transformational leadership and the work environment have a positive and significant effect on intrinsic motivation. Transformational leadership has a path coefficient of 0.43 ($t = 9.85$; $p = 0.000$), while the work environment has a path coefficient of 0.39 ($t = 8.72$; $p = 0.000$). These findings are in line with the theory of Bass and Avolio, which states that transformational leadership can enhance subordinates' intrinsic motivation through vision, inspiration, intellectual stimulation, and individual consideration (Bass & Avolio, 1994). Additionally, work environment theory emphasizes that a safe, comfortable, and harmonious working condition plays an important role in boosting individuals' enthusiasm and drive (Sedarmayanti, 2017). The results of this study, which show that transformational leadership has a positive and significant effect on intrinsic motivation, are in line with recent research findings that transformational leaders are

able to create work meaning, enhance autonomy, and encourage employees' psychological engagement (Breevaart & Bakker, 2021; Hoch et al., 2018).

Recent research by Li et al. (2022) also confirms that transformational leadership increases intrinsic motivation through mechanisms of psychological empowerment and organizational trust. Interview results support these findings, with respondents stating that communicative leadership and a conducive work environment increase their motivation at work.

Furthermore, the research results indicate that transformational leadership and work environment have a positive effect on job satisfaction, both directly and indirectly through intrinsic motivation. Transformational leadership and work environment have direct path coefficients to job satisfaction of 0.31 and 0.27, respectively, while intrinsic motivation has a significant effect on job satisfaction with a coefficient of 0.41 ($t = 9.23$). These findings suggest that intrinsic motivation acts as an intervening variable that mediates the influence of transformational leadership and work environment on job satisfaction. Theoretically, these results are consistent with motivation and job satisfaction theories which state that individuals with high intrinsic motivation tend to have higher levels of job satisfaction because work is seen as a source of achievement and self-fulfillment (Herzberg, 1966; Robbins & Judge, 2017). Interview results also show that employees who feel motivated by leadership support and a good work environment tend to be more satisfied with their jobs, both in terms of outcomes and work processes. Thus, it can be concluded that transformational leadership and the work environment are important factors in enhancing employees' intrinsic motivation and job satisfaction. Increasing job satisfaction can be more effectively achieved through strengthening the quality of transformational leadership and creating a conducive work environment that can stimulate employees' intrinsic motivation.

A conducive work environment has been proven to enhance intrinsic motivation, particularly through aspects of psychological comfort and social relationships in the workplace. This finding is consistent with the research of Salanova et al. (2020) and Parker et al. (2021), which concluded that a supportive work environment increases work engagement and employees' internal motivation. In the context of organizations in Indonesia, the study by Putri and Nugroho (2021) reinforces the finding that a safe and supportive work environment significantly contributes to employees' intrinsic motivation. The findings of this study, which indicate that transformational leadership and the work environment directly affect job satisfaction, are consistent with the empirical studies of Top et al. (2020) and Eva et al. (2021), who stated that visionary leadership style and good working conditions enhance job satisfaction through perceptions of fairness, organizational support, and psychological rewards. The study by Wibowo et al. (2022) in the Indonesian corporate sector also proves that transformational leadership is a strong predictor of employee job satisfaction.

The findings of this study demonstrate that transformational leadership and work environment have significant positive effects on intrinsic motivation and job satisfaction. These results confirm that leadership and contextual factors play a crucial role in shaping employees' psychological states and work attitudes.

The positive effect of transformational leadership on intrinsic motivation supports Bass and Avolio's (1994) theory, which emphasizes that inspirational leadership behaviors enhance employees' sense of meaning and autonomy at work. This finding aligns with recent studies by Li et al. (2022) and Breevaart and Bakker (2021), which indicate that transformational leadership fosters intrinsic motivation through psychological empowerment.

Similarly, the work environment was found to significantly influence intrinsic motivation. This result supports Sedarmayanti's (2017) assertion that both physical and psychosocial workplace conditions contribute to employees' internal motivation. A supportive work environment creates psychological comfort, enabling employees to engage more deeply with their work.

Furthermore, transformational leadership and work environment were shown to have direct effects on job satisfaction. These findings are consistent with previous research suggesting that visionary leadership and favorable working conditions enhance job satisfaction by increasing perceptions of fairness, support, and well-being (Top et al., 2020; Wibowo et al., 2022). Importantly, intrinsic motivation was found to significantly mediate the relationship between transformational leadership, work environment, and job satisfaction. This indicates that leadership and environmental factors enhance job satisfaction not only directly but also indirectly by strengthening employees' intrinsic motivation. This result reinforces Herzberg's motivation theory and is consistent with self-determination theory (Ryan & Deci, 2020).

The findings of this study indicate that transformational leadership and work environment play an important role in shaping employees' intrinsic motivation, which subsequently influences job satisfaction. The statistical results show that transformational leadership has a significant positive effect on intrinsic motivation. This finding suggests that leadership behaviors characterized by inspirational motivation, individualized consideration, and intellectual stimulation are effective in fostering employees' internal drive to perform their work. Employees tend to feel more motivated when leaders provide clear vision, recognition, and personal support. This result is consistent with previous empirical studies that emphasize the motivational role of transformational leadership. Breevaart and Bakker (2021) found that transformational leaders enhance employees' intrinsic motivation by creating meaningful work experiences and aligning individual values with organizational goals. Similarly, Li et al. (2022) reported that transformational leadership strengthens employees' psychological engagement, which in turn increases intrinsic motivation. These findings support the argument that leadership influence extends beyond task direction and performance control, affecting employees' internal psychological states.

In the context of this study, which was conducted in a private organization with relatively high operational demands, transformational leadership becomes particularly relevant. Employees who face performance targets and routine job demands require leaders who are able to inspire, encourage innovation, and provide emotional support. Without such leadership behaviors, employees may rely solely on external incentives, which are often insufficient to sustain long-term motivation. Therefore,

transformational leadership can be viewed as a strategic approach to maintaining intrinsic motivation in demanding work environments.

The results also demonstrate that the work environment has a significant positive effect on intrinsic motivation. A supportive work environment, including both physical and psychosocial aspects, contributes to employees' sense of comfort, security, and psychological safety. When employees perceive their work environment as conducive, they are more likely to develop enthusiasm and internal motivation toward their tasks. This finding aligns with the job demands–resources perspective, which emphasizes that supportive work conditions function as important resources that enhance motivation (Bakker & Demerouti, 2017). Empirical evidence from previous studies supports this relationship. Putri and Nugroho (2021) found that a positive work environment significantly enhances employee motivation and engagement, particularly in organizational settings that require sustained performance. In the present study, factors such as interpersonal relationships, communication patterns, and workspace conditions appear to contribute to employees' intrinsic motivation. This suggests that improving the quality of the work environment is not merely a matter of physical facilities but also involves fostering positive social interactions and supportive organizational climates.

Furthermore, the findings reveal that intrinsic motivation has a significant positive effect on job satisfaction. Employees who are intrinsically motivated tend to experience higher levels of satisfaction because they perceive their work as meaningful and fulfilling. This result supports Herzberg's Two-Factor Theory, which posits that intrinsic factors such as achievement, recognition, and responsibility are key determinants of job satisfaction (Herzberg et al., 1966). When employees are motivated by internal factors, they are more likely to feel satisfied regardless of external pressures.

This finding is also consistent with contemporary motivation research. Gagné et al. (2015) emphasized that intrinsic motivation leads to positive work attitudes, including job satisfaction and organizational commitment. In the context of this study, intrinsic motivation serves as a psychological mechanism that translates leadership practices and work environment conditions into positive job-related outcomes. Employees who feel internally motivated are better able to cope with job demands and maintain satisfaction with their work.

From a practical perspective, these findings imply that organizations should not focus solely on structural improvements but also prioritize leadership development and motivational strategies that nurture employees' internal drive. In the Indonesian organizational context, these findings highlight the importance of leadership practices that emphasize inspiration, individual consideration, and meaningful work. Employees tend to respond positively to leaders who provide vision and psychological support, especially in environments with high operational demands. A supportive work environment further strengthens intrinsic motivation by creating psychological safety and comfort, which ultimately enhances job satisfaction. Therefore, organizations should integrate leadership development programs with workplace improvement strategies to achieve sustainable employee well-being.

The findings of this study support transformational leadership theory, which posits that leaders who inspire and intellectually stimulate employees can enhance intrinsic motivation and job satisfaction. These results are consistent with previous studies that emphasize the psychological mechanism through which leadership affects employee attitudes. Overall, the findings of this study extend existing leadership and motivation literature by providing empirical evidence from an organizational context in Indonesia. The results highlight that transformational leadership and work environment are not only directly relevant to employee experiences but also indirectly influence job satisfaction through intrinsic motivation. Practically, these findings suggest that organizations should invest in leadership development programs that emphasize transformational behaviors and continuously improve work environment conditions to foster intrinsic motivation and enhance job satisfaction. By doing so, organizations can create a more motivated, satisfied, and sustainable workforce.

6. Conclusions

By acknowledging these research boundaries and limitations, this study provides a more accurate interpretation of the findings and offers directions for future research. Based on the results of this study, several conclusions can be drawn. First, this study concludes that transformational leadership has a significant positive effect on employees' intrinsic motivation. This finding answers the first research question and indicates that leadership behaviors characterized by inspiration, individualized consideration, and intellectual stimulation play an important role in enhancing employees' internal motivation. Second, the study finds that the work environment has a significant positive effect on intrinsic motivation. This result addresses the second research question and suggests that both physical and psychosocial aspects of the work environment contribute to employees' motivation by creating a sense of comfort, security, and psychological support. Third, this study concludes that intrinsic motivation has a significant positive effect on job satisfaction. This finding answers the third research question and demonstrates that employees who are internally motivated tend to experience higher levels of satisfaction with their jobs, as they perceive their work as meaningful and fulfilling.

Overall, these findings indicate that intrinsic motivation serves as a key mechanism through which leadership practices and work environment conditions influence employee job satisfaction. By fostering transformational leadership behaviors and improving work environment conditions, organizations can enhance intrinsic motivation and ultimately increase job satisfaction.

References

- Aivolio, B. J., Baiss, B. M., & Jung, D. I. (1999). Re-examining the components of transformational and transactional leadership using the Multifactor Leadership Questionnaire. *Journal of Occupational and Organizational Psychology*, 72(4), 441-462. <https://doi.org/10.1348/096317999166789>

- Baikkeir, Ai. B., & Deimeiroutii, Ei. (2017). Job deimands-reisourceis theiory: Taikiing stock and lookiing forwaird. *Journail of Occupaitiionail Heialth Psychology*, 22(3), 273-285. <https://doi.org/10.1037/ocp0000056>
- Baiss, B. M. (1985). *Leiaideirshiip aind peirformaincei beyond eixpeictaitiions*. Freiei Preiss.
- Baiss, B. M., & Aivolio, B. J. (1994). *Improviing orgainiizaitiionail eiffeictiiveineiss through trainsformaitiionail leiaideirshiip*. Saigei Publicaitiions.
- Breieivaiairt, K., & Baikkeir, Ai. B. (2021). Daiiily job deimands aind eimployeiei work eingageimeint: Thei rolei of daiiily trainsformaitiionail leiaideirshiip beihaivior. *Journail of Occupaitiionail Heialth Psychology*, 26(1), 55-63. <https://doi.org/10.1037/ocp0000243>
- Burns, J. M. (1978). *Leiaideirshiip*. Hairpeir & Row.
- Eivai, N., Robiin, M., Scindjaiyai, S., Vain Dieireindonck, D., & Liidein, R. C. (2021). Seirvaint leiaideirshiip: Ai systeimaitiic reivvieiw aind caill for futurei reiseiairch. *Thei Leiaideirshiip Quairteirly*, 32(1), 101-114. <https://doi.org/10.1016/j.leiaiquai.2020.101499>
- Gaigné, M., Foreist, J., Vainsteinkistei, M., Creivieir-Braiid, L., Vain dein Broeick, Ai., Aispeili, Ai. K., & Weistbyei, C. (2022). Thei multiidimeinsiionail work motiivaitiion scailei: Vailidaitiion eivideincei iin seivein languaigeis aind niinei countriieis. *Eiuropeiaian Journail of Work aind Orgainiizaitiionail Psychology*, 31(2), 213-230. <https://doi.org/10.1080/1359432X.2021.1956056>
- Haiir, J. F., Blaick, W. C., Baiiin, B. J., & Aindeirson, R. Ei. (2019). *Mutiivairiiaitei daitai ainaiysiis* (8th eid.). Ceingaigei Leiairniing.
- Heirzbeirg, F., Maiusneir, B., & Snydermain, B. B. (1966). *Thei motiivaitiion to work* (2nd eid.). John Wiiley & Sons.
- Hoch, J. Ei., Bommeir, W. H., Duleibohn, J. H., & Wu, D. (2018). Do eithiicail, aiutheintiic, aind seirvaint leiaideirshiip eixplaiiin vairiaincei aibovei aind beyond trainsformaitiionail leiaideirshiip? *Aicaideimy of Mainaigeimeint Journail*, 61(2), 501-529. <https://doi.org/10.5465/aimj.2015.0426>
<https://doi.org/10.1177/0149206316665461>
- Lii, H., Yuain, B., Yu, Y., Lii, J., & Meing, Q. (2022). Work motiivaitiion of priimairy heialth workeirs iin Chiina: Thei trainslaitiion of ai meaisureimeint scailei aind iits correilaitiion wiith turnoveir iinteintiion. *Riisk Mainaigeimeint aind Heialthcairei Poliicy*, 15, 1369-1381. <https://doi.org/10.2147/RMHP.S366389>
<https://doi.org/10.2147/RMHP.S366389>
- Lii, Y., Sun, J. M., & Cheing, B. S. (2022). Trainsformaitiionail leiaideirshiip aind eimployeiei motiivaitiion: Ai multiileveil meidiiaitiion ainaiysiis. *Journail of Busiineiss Reiseiairch*, 139, 121-133. <https://doi.org/10.1016/j.ibusreis.2021.09.061>
- Lockei, Ei. Ai. (1976). Thei naiturei aind causeis of job satiisfaictiion. Iin M. D. Dunneitei (Eid.), *Haindbook of iindustriail aind orgainiizaitiionail psychology* (pp. 1297-1349). Raind McNailly.
- Pairkeir, S. K., Kniight, C., & Ohly, S. (2021). Deisiigniing motiivaitiing jobs: Ain eixpaineid fraimeiwork for liinkiiing work chairaictieriistiics aind motiivaitiion. *Journail of Aippliiead Psychology*, 106(2), 336-361. <https://doi.org/10.1037/aip10000669>
- Putrii, R. Ai., & Nugroho, R. (2021). Liingkungain keirjai dain motiivaisii iintriinsiiik teirhaidaip keipuaisain keirjai kairyaiwain. *Jurnail Mainaigeimein dain Biisniis Iindoneisiiai*, 8(2), 145-156. <https://doi.org/10.1007/s43681-021-00098-5>
- Raiziig, Ai., & Maiulaibakhsh, R. (2015). Impaict of workiiing enviironmeint on job satiisfaictiion. *Proceidiiai Eiconomiics aind Fiiinaincei*, 23, 717-725. [https://doi.org/10.1016/S2212-5671\(15\)00524-9](https://doi.org/10.1016/S2212-5671(15)00524-9)
[https://doi.org/10.1016/S2212-5671\(15\)00524-9](https://doi.org/10.1016/S2212-5671(15)00524-9)
- Robbiins, S. P., & Judgei, T. Ai. (2019). *Orgainiizaitiionail beihaivior* (18th eid.). Peairson Eiducaitiion.
- Ryain, R. M., & Deicii, Ei. L. (2000). Seilf-deiteirmiinaitiion theiory aind thei faicilitaitiion of iintriinsiiic motiivaitiion. *Aimeiriicain Psychologiist*, 55(1), 68-78. <https://doi.org/10.1037/0003-066X.55.1.68>
<https://doi.org/10.1037/0003-066X.55.1.68>
- Seidairmaiyaaintii. (2017). Mainaigeimein sumbeir daiyai mainusiiai: Reiformaisii biirokraisii dain mainaigeimein peigaiwaiii neigeirii siipiil. Reifikaik Aidiitaimai.
- Shiin, S. J., Zhou, J., & Taiylor, M. S. (2012). Thei rolei of leiaideirshiip iin eimployeiei creiaitiiviiy. *Journail of Aippliiead Psychology*, 97(4), 703-717. <https://doi.org/10.1037/ai0027357>

- Top, M., Aikdeirei, M., & Taircain, M. (2020). Transformaitiönail leiaideirshiip, job satiisfaictiön, aind orgainiizaitiönail commiitmeint iin heiaithcairei. *Leiaideirshiip iin Heiaith Seirviiceis*, 33(4), 357-374. <https://doi.org/10.1108/LHS-07-2019-0048>
- Wübowo, Ai., Sutaingo, Ei. M., & Hiidaiyait, R. (2022). Peingairuh keipeimiimpiünain transformaisiönail teirhaidaip keipuaisain keirjai kairyaiwain. *Jurnail Mainaijeimein Iindoneisiiai*, 22(1), 45-58.
- Wulaindairii, D., & Hiidaiyait, R. (2021). Peirain motiüvaisii iintriinsiiik dailaim meimeidiüaisii keipeimiimpiünain dain keipuaisain keirjai. *Jurnail Psiiikologi iindustrii dain Orgainiisaisii*, 10(2), 89-102.