

Transformational leadership and employee efficiency: Mediating role of knowledge sharing

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ABSTRACT

Transformational leadership has been widely recognized for its potential to enhance employee performance. However, the mechanisms through which this influence occurs are not fully understood. This study examines the impact of transformational leadership on employee efficiency, with knowledge sharing as a mediating variable. The research was conducted at Tumbakmas Niagasakti Company, a trading and distribution company in Indonesia. The objective is to determine the extent to which transformational leadership influences employee efficiency and whether knowledge sharing plays a significant role in this relationship. A quantitative approach using a survey questionnaire was employed to collect data from 120 employees. The collected data was analyzed using Partial Least Squares Structural Equation Modelling. The findings reveal that transformational leadership has a positive and significant impact on employee efficiency. Moreover, knowledge sharing was found to partially mediate this relationship, indicating that transformational leaders who foster a culture of knowledge sharing can enhance employee efficiency. The study contributes to the existing literature by providing empirical evidence on the mediating role of knowledge sharing in the relationship between transformational leadership and employee efficiency within an Indonesian context. The implications of these findings for organizations seeking to improve employee performance and organizational effectiveness are discussed.

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1. Introduction

In the era of globalization and increasingly tight business competition, employee efficiency has become paramount to a company's success (Santoso et al., 2023). Knowledge-Based Human Resource Management (KBHRM) has emerged as a critical approach to enhancing employee efficiency by strategically integrating knowledge management principles into human resource practices (Ologbo et al., 2015; Al-Tal & Emeagwali, 2019; Men et al., 2019). By leveraging an organization's intellectual capital and fostering a culture of continuous learning and knowledge sharing, KBHRM empowers employees to effectively utilize their knowledge and skills, thereby contributing significantly to organizational competitiveness in knowledge-based economies. This integrated approach combines Knowledge Management (KM) processes with Human Resource Management (HRM) functions, such as recruitment, training, and performance appraisal, to build a knowledge-sharing environment that supports the development of a highly skilled and competitive workforce (Horvat & Bobek, 2015). The symbiotic relationship between KM and HRM is crucial, as effective human resource management practices are essential for acquiring, developing, and effectively utilizing the knowledge embedded within the workforce.

Although KBHRM provides a framework for leveraging employee knowledge, the successful implementation of these strategies requires strong leadership support. Transformational leaders play a crucial role in creating a culture that values and encourages knowledge sharing among employees. By setting a positive example through their own knowledge-sharing behavior, providing clear expectations for knowledge sharing, and recognizing and rewarding employees for their contributions to organizational learning, transformational leaders can significantly enhance the effectiveness of KBHRM initiatives and drive improvements in employee efficiency. The creation of innovation in relation to encouraging employee efficiency cannot be separated from the role of leaders, one of which is a transformational leader (Dwivedi et al., 2020) in managing the human resources owned by an organization. Good human resource management improves employee knowledge, skills, attitudes, and behavior (Al-Tal & Emeagwali, 2019). The creation of an innovative environment enables a company to gain and maintain its competitive advantage. Good employee knowledge, skills, attitudes, and behavior contribute significantly to increasing employee efficiency.

Transformational leadership has emerged as one of the most effective leadership styles for enhancing employee performance (Bastari et al., 2020). By inspiring and motivating subordinates to go beyond expectations, transformational leaders foster a climate of trust, intellectual stimulation and individual consideration. This leadership style cultivates intrinsic motivation among employees, driving them to achieve organizational goals with greater dedication and enthusiasm, ultimately leading to increased work efficiency (Dwivedi et al., 2020). Numerous studies have consistently demonstrated the significant positive impact of transformational leadership practices on employee efficiency in various organizational contexts (Bos-Nehles et al., 2017; Dwivedi et al., 2020; Yin et al., 2020; Rony et al., 2023).

Knowledge management is widely recognized as a crucial component in driving innovation and achieving organizational success (Ologbo et al., 2015). Knowledge sharing, which involves the seamless exchange of information, ideas, and insights among individuals, teams, and the entire organization, is at the heart of effective knowledge management. This collaborative process has been identified as a critical factor in enhancing employee efficiency (Asrar-ul-Haq & Anwar, 2016; Aljaaidis et al., 2020). Furthermore, knowledge sharing can act as a crucial mediator between transformational leadership and employee effectiveness. By fostering a culture that values and actively promotes knowledge sharing, transformational leaders can significantly amplify their positive impact on employee efficiency (Dwivedi et al. 2020).

Existing research suggests that organizations can leverage various human resource management practices to foster a culture of knowledge sharing and collaboration among employees. Practices such as training, performance management, and reward systems can shape employee attitudes and behaviors toward knowledge sharing. Referring to social exchange theory, it is estimated that transformational leadership practices in managing employees with strong knowledge-sharing capabilities are a powerful driver of employee efficiency. In the study Dwivedi et al. (2020) and Raditya (2022) found that transformational leadership increases the willingness of team members to share their knowledge and expertise with each other, which ultimately increases employee efficiency.

Transformational leadership significantly impacts human resource practices, particularly in developing and utilizing an organization's knowledge assets (Mansouri, 2016). This leadership style is characterized by several key components, including vision, inspirational motivation, intellectual stimulation, personal recognition, and supportive leadership. Transformational leadership influences various human resource practices, including training, staffing, performance evaluation, reward systems, and employee participation (Mansouri, 2016). These practices are essential for developing employees' skills and capabilities, thereby enhancing their contribution to the organization's knowledge assets. Transformational leaders encourage employees to develop and use their knowledge to advance the organization. In addition, transformational leaders pay attention to the individual needs of subordinates, encourage them to adapt to changes in the environment, and set an example by sharing knowledge. Several studies have shown that transformational leadership positively affects employee performance and efficiency (Dwivedi et al., 2020; Shafi et al., 2020; Rony et al., 2023). In other studies, knowledge sharing has been found to play an important role in increasing organizational and employee efficiency (Kuzu & Özilhan, 2014; Raditya, 2022). This supports the idea that knowledge sharing can strengthen the relationship between transformational leadership and employee efficiency. Thus, this study examines the mediating role of knowledge sharing in the relationship between transformational leadership and employee efficiency.

Although many studies have discussed the relationship between transformational leadership, knowledge sharing, and employee efficiency, there are still limited studies that focus on the trading and distribution sector, such as Tumbakmas Niagasakti Company. Different industry contexts have unique characteristics that can affect the dynamics of the relationship between transformational leadership, knowledge sharing, and employee efficiency. To determine the influence of these variables, especially in the trading industry, such as Tumbakmas Niagasakti Company, it is necessary to explore them in greater depth. This study discusses the mechanism, one of which includes mediation variables. Therefore, this study examines the role of knowledge-sharing mediation in the relationship between transformational leadership and employee efficiency.

2. Literature Review and Hypothesis Development

2.1. Literature Review

2.1.1. Employee Efficiency

Employee efficiency is a solid foundation for an organization's success (Raditya, 2022). When employees work efficiently, productivity increases, operational costs decrease, and the output quality improves. This allows organizations to achieve higher targets, increase competitiveness, and ultimately achieve greater profit. High efficiency also contributes to employee satisfaction because employees feel more productive and valuable to the company. Employee efficiency is influenced by various factors, ranging from leadership quality to a conducive work environment (Kuzu & Özilhan, 2014; Shafi

et al., 2020; Rony et al., 2023). The company's ability to manage human resources, provide appropriate training, and create a positive work culture greatly impacts employee efficiency. In addition, factors such as the technology used, job design, and incentive systems play an important role in encouraging employees to work more efficiently.

Employee efficiency in the context of Transformational Leadership is influenced by several interrelated factors (Dwivedi et al., 2020). Such as intrinsic motivation, human resource management, skills possessed, leaders, productivity management, intrinsic motivation, competence, and knowledge sharing. A good work attitude is reflected in the willingness to work in shifts, accept additional tasks, and collaborate in a team. The skill level is determined by education and training in supervisor management and industrial engineering. Intrinsic motivation, enhanced by transformational leadership through an inspiring vision and leader support, also plays a role in creating employee efficiency. This motivation makes employees feel motivated to contribute more to their organization. In addition to motivation, the competence possessed also plays a role in employee efficiency. Competence is enhanced through sharing knowledge and work experience, and employees' ability to learn and adapt to new technologies and best practices improves their performance. It is the practice of sharing knowledge that improves individual competence and makes them more dynamic, creative, and innovative in their work.

Employee efficiency is a crucial factor in organizational success. Several studies have highlighted the importance of various elements that contribute to employee efficiency and, consequently, to organizational success. Employee motivation and intrinsic motivation are crucial for organizational efficiency. According to Maslow's theory of needs, including these needs can increase work motivation and ultimately impact efficiency positively. Lack of motivation can lead to changes in staff turnover and decreased efficiency, making investments in training and development less effective (Petrova et al., 2020). Motivated employees tend to be more engaged and productive, thus contributing positively to the achievement of organizational goals (Oncioiu et al., 2018; Almasradi et al., 2024).

Furthermore, employee efficiency is influenced by HRM. Effective HRM practices, such as employee training, empowerment, and leadership, are significant predictors of employee satisfaction and loyalty, which, in turn, improve organizational performance (Santoso et al., 2023). HRM strategies aligned with company goals can increase employee engagement and efficiency, leading to long-term success (Milhem, 2025).

Leaders are also a factor in employee efficiency (Almaamari & Alaswad, 2021; Almasradi et al., 2024). The harmonious relationship between employees and organizational leaders is reflected in their joint efforts to increase productivity through quality control circles. In addition, the efficient management of resources and work systems increases productivity. An appropriate management strategy ensures optimal resource allocation and increases operational efficiency.

Therefore, integrating these factors in the context of transformational leadership can significantly increase employee efficiency. Organizations must continue to improve employee efficiency to remain competitive and maintain or even increase their competitive advantage. To continue improving employee efficiency, this study highlights the importance of transformational leadership and knowledge sharing in organizations (Soleas, 2020). Leaders with experience and expertise are more likely to generate efficiency because they can combine their knowledge and insights to overcome complex dynamics (Zou et al. 2023). Therefore, fostering motivation and transformational leadership, where team members feel comfortable sharing knowledge

without fear of being judged, is very important to increase employee efficiency. Employee efficiency is key to organizational success. With efficient employees, companies can achieve their targets faster, reduce costs, and improve the quality of their products or services. To achieve optimal efficiency, companies must pay attention to various factors, such as leadership quality, proper training, a conducive work environment, and supportive technology. When employees feel valued, motivated, and possess the right skills, they are more productive and contribute to the success of the organization.

2.1.2. Knowledge Sharing

Knowledge sharing is an important component of an organization's success and the development of organizational member knowledge. Knowledge sharing enables the transfer of insights, experiences, and expertise among individuals, teams, and organizations (Men et al., 2019; Vandavasi et al., 2020; Bajaj et al., 2021). In a good knowledge-based economy, it is important for organizations to maintain a competitive advantage and drive innovation (Li et al., 2021). The process of knowledge sharing in an organization consists of acquiring, storing, sharing, and applying knowledge (Lin et al., 2021). This knowledge-sharing activity allows colleagues to share and disseminate relevant experiences that they have experienced, and colleagues who are involved in knowledge-sharing activities appear friendlier and more open in their communication style. Several previous studies have recently shown a high interest in knowledge sharing in organizations to support innovation (Hao et al., 2022). The results show that knowledge sharing behavior affects innovation performance in companies.

Knowledge sharing can occur at the individual and organizational levels, with individual employees sharing knowledge that can help colleagues and the organization capture, organize, and disseminate knowledge to benefit the entire business. At the individual level, knowledge sharing is influenced by various factors, including employees' willingness to share knowledge, trust and reciprocity within the organization, and recognition and rewards for knowledge sharing behavior (Nguyen et al., 2020).

At the organizational level, a knowledge-sharing culture is characterized by a set of shared values, beliefs, and practices that support the open exchange of information and ideas. Organizations with a strong knowledge-sharing culture are more likely to succeed than those without, because they are better equipped to leverage the knowledge and expertise of their employees. A supportive culture can create conditions that encourage sharing, and sharing mechanisms provide opportunities for the transfer of knowledge from one part or level of the organization to another, allowing for the creation of new organizational knowledge. Furthermore, a culture of trust and a collaborative culture have been shown to enhance knowledge sharing and organizational effectiveness.

2.1.3. Transformational Leadership

The uncertainty and speed of change in the organizational environment require organizations to always be ready and continue to increase their productivity so that they continue to exist. An adaptive driving force is required to maintain this existence. One of the driving forces is the leader of the organization. Transformational leaders are seen as the right leadership style to face an uncertain environment (Bastari et al., 2020; Shafi et al., 2020). Transformational leadership is believed to influence employee work

efficiency. This is in line with research showing that transformational leadership positively impacts employee work efficiency (Dwivedi et al., 2020).

Transformational leaders can motivate employees to improve their performance and achieve organizational goals. In addition, the influence of transformational leadership can be strengthened by knowledge sharing among employees (Yin et al., 2020). Knowledge sharing among employees allows them to exchange information and experiences, which can encourage creativity and innovation in the organization. Therefore, it is also expected to increase employee efficiency. Transformational leadership is an exciting and rapidly growing field that emphasizes the strategic role of knowledge management in improving organizational performance and its competitiveness. Transformational leadership has become a critical aspect of organizational success in the modern knowledge-driven economy (Al-Tit et al., 2022). The increasing level of intellectual capital and the need to effectively manage and utilize organizational knowledge resources have driven a shift in traditional human resource management practices (Singh et al., 2021; Santoso et al., 2023). Effective transformational leadership strategies focus on identifying, capturing, and utilizing both types of knowledge to drive innovation, improve decision-making, and enhance organizational performance. Another important aspect of transformational leadership is the development of a knowledge-sharing culture (Singh et al., 2021). Another important aspect of transformational leadership is the alignment of human resource practices with an organization's knowledge management goals. This includes developing recruitment and selection processes that target candidates with the necessary knowledge and skills, as well as implementing training and development programs that enhance employees' knowledge and competencies. In addition, Transformational Leadership emphasizes the importance of a performance management system that recognizes and rewards the acquisition, sharing, and application of knowledge.

Furthermore, transformational leaders can communicate, motivate, and create a comfortable environment for employees. By creating a comfortable environment, employees feel comfortable and encouraged to share their knowledge, insights, and experiences. This can be achieved through the implementation of various knowledge-sharing initiatives, such as communities of practice, mentoring programs, and collaborative workspaces (Vandavasi et al., 2020).

2.2. Hypothesis Development

2.2.1. The Effect of Transformational Leadership on Employee Efficiency

Transformational leadership and employee efficiency are two interrelated concepts that significantly influence the success of organizations in an increasingly competitive era. Transformational leadership emphasizes providing inspiration and motivation to employees to achieve organizational goals, whereas employee efficiency refers to the extent to which employees can produce maximum output using minimal input (Pasha et al., 2017; Bastari et al., 2020). Several previous studies have shown that transformational leadership has a positive effect on employee performance and motivation (Nguyen et al., 2020; Soleas, 2020), while other studies have stated that transformational leadership has a significant positive impact on employee performance at a university (Rony et al., 2023). However, the relationship between transformational leadership and employee efficiency in distribution companies has not been extensively explored. Therefore, in this study, we aim to determine the efficiency of employees, which is an important element of the company.

H₁: Positive Effect between Transformational Leadership and Employee Efficiency

2.2.2. The Effect of Transformational Leadership on Knowledge Sharing

Transformational leadership emphasizes the role of leaders who inspire and motivate their followers to achieve higher performance levels (Bastari et al., 2020; Al-Tit et al., 2022). This concept illustrates how transformational leadership positively influences employee efficiency by fostering an environment that supports growth and development. Therefore, it is necessary to understand the relationship between transformational leadership and knowledge sharing actually is. Previous studies that examined the relationship between transformational leadership and knowledge sharing stated that transformational leadership increases knowledge sharing by encouraging team-related perceptions (Liu & Li, 2018) and that both group- and individual-focused leadership have a positive influence on knowledge sharing (Li et al., 2014).

H₂: Positive Effect between Transformational Leadership and Knowledge Sharing

2.2.3. The Effect of Knowledge Sharing on Employee Efficiency

Knowledge sharing is a key factor that can improve employee performance and efficiency (Vandavasi et al., 2020). Knowledge sharing is a process in which employees share their information, experiences, and expertise (Hao et al., 2022). In theory, this knowledge sharing can increase motivation, innovation, and efficiency. With access to more complete information, employees can complete their tasks more quickly and effectively. Previous studies have found that employee relationships and knowledge sharing significantly and positively affect employee performance in hotels (Kuzu & Özilhan, 2014). Other studies have found that transformational leadership and knowledge sharing have knowledge sharing positively affect employee efficiency, with employee satisfaction as a mediating factor (Raditya, 2022). In-depth research is required to determine whether this mechanism applies to logistics companies.

H₃: Positive Effect Between Knowledge Sharing and Employee Efficiency

2.2.4. The Effect of Knowledge Sharing Mediation on The Effect between Transformational Leadership and Employee Efficiency

Previous studies have not been able to systematically explained the relationship and factors that influence the relationship between Transformational Leadership and employee efficiency. Knowledge sharing is thought to mediate this relationship. Knowledge sharing is an important mediating factor between transformational leadership and employee efficiency (Dwivedi et al., 2020). This shows that effective knowledge sharing enhances the impact of transformational leadership on employee performance, indicating that leaders who share their knowledge can significantly improve team effectiveness and performance. Therefore, in this study, the mediation element of knowledge sharing was included. This mediation variable was chosen because knowledge sharing is important in the emergence of innovation and the role of leaders, which ultimately increases employee efficiency (Men et al., 2019; Vandavasi et al., 2020; Li et al., 2021; Chae & Shin, 2024).

H₄: Knowledge Sharing Mediates the Relationship Between Transformational Leadership and Employee Efficiency

2.3. Research Framework

The research framework is shown in Figure 1. This study examines the relationship between the effect of knowledge sharing as a mediating variable between transformational

leadership and employee efficiency based on literature observations and research hypotheses.

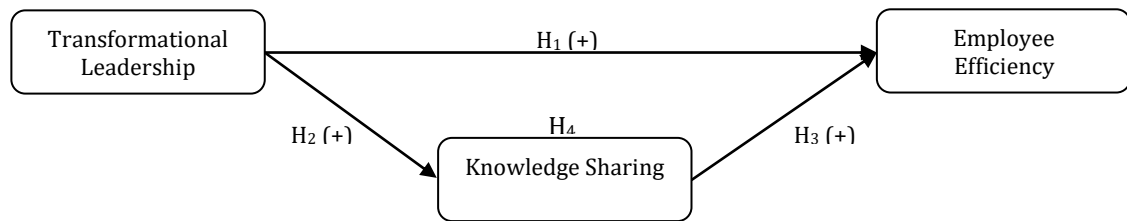


Figure 1. Research Framework

3. Research Methods

3.1. Population and Sampling Method

This study adopts a quantitative research approach. By choosing this approach, researchers can explore the relationship between observed variables without direct intervention and provide in-depth insights into the relationship between variables. This study was conducted using primary data by distributing questionnaires to the marketing team of Tumbakmas Niagasakti Company. The population of this study was all employees of Tumbakmas Niagasakti Company in Semarang, totalling 120 employees. The sample of this study consisted of 120 employees; therefore, this study used a census sampling technique.

3.2. Data Collecting Method

Data collection in this study was carried out using a survey method by filling out a questionnaire in the form of a Google form by respondents. The questionnaire contains questions that are indicators of each variable. Each question item was answered on a Likert scale of 1 to 5. Transformational leadership emphasizes the role of leaders who inspire and motivate their followers to achieve higher levels of performance. The act of making the right decisions and inspiring others to perform well. Transformational leadership was measured using four item indicators (Avolio et al., 1999). Employee efficiency is an employee's ability to achieve the organization's predetermined goals by using available resources optimally, including the development of new ideas, technologies, and techniques, as well as trials and applications in performance (Merry, 2013). Employee efficiency is measured using five indicators (Merry, 2013). This study highlights knowledge sharing as an important mediator between transformational leadership and employee performance. Knowledge sharing was measured using six item indicators (Lu et al., 2006; Lin, 2007).

3.3. Data Analysis Method

Data analysis in this study used structural equation modelling with partial least squares (SEM-PLS). SEM was chosen because it is capable of testing complex research models simultaneously. In addition, PLS is considered suitable because it can handle small sample sizes and multicollinearity among the independent variables. The purpose of using SEM-PLS analysis is to maximize the variance explained by the variables in the model with R-squared as a measure of goodness-of-fit. Furthermore, bootstrap sampling procedures were used to estimate the t-statistics in the SEM-PLS path coefficients. This study used a bootstrap sample of 500 samples. This number was chosen so that the data approached a normal distribution and was more directed towards better estimates of statistical test results, even though PLS does not require a normal distribution.

The measurement model was used to evaluate the relationship between indicators and variables by assessing the reliability and validity figures of the indicators related to the variables. Determining the relationship between indicators and latent variables (constructs) that they represent. An indicator is considered valid if it has a loading value above 0.50 (Ju et al., 2018). The reliability value can be determined using the average variance extracted (AVE) value. For comparison, the convergent validity value is 0.5 or more (Ju et al., 2018). The reliability value can also be observed through discriminant validity. Discriminant validity is obtained by comparing the results of the square root of the AVE, which must be higher than the correlation between other variables in the same column, vertically or horizontally.

Model testing was performed by assessing the Goodness of Fit criteria. This assessment was performed to test the suitability of the model structure with the criteria determined by the test tool. In this test tool, there are three criteria that must be met for the model to be considered fit. The first criterion, the Average Path Coefficient (APC) model, is said to be fit if the p-value < 0.001. The second criterion, the Average R-squared (ARS) model, is said to be fit if the p-value < 0.001. The last criterion, the Average Block VIF (AVIF), is said to be fit if the model results are less than 5.

Hypothesis testing was performed to determine the effect or relationship between independent and dependent variables. The level of significance used in this study was 5%. If the p-value is greater than 0.05, the hypothesis is rejected. To test whether a mediating variable (mediator) affects the relationship between independent and dependent variables, a mediation test must be conducted. In this study, the mediation relationship was determined by examining the direct and indirect effects of the test results. If the indirect effect p-value is significant, then the mediating variable can strengthen the relationship between the dependent variable and the dependent variable.

4. Results and Discussion

4.1. Characteristics of Respondents

Based on the results of data collection with a questionnaire distributed to the marketing department of Tumbakmas Niagasakti Company using Google Forms, 120 respondents were obtained. The data obtained were verified according to the number of marketing teams at Tumbakmas Niagasakti Company, so it is certain that the entire marketing team filled out the questionnaire. From the data collected, it is expected to provide a picture of the sample from this study. Respondents were categorized based on gender, age, last education, position in the marketing team, and length of service. More detailed data are presented in Table 1.

Table 1. Characteristics of Respondents

Classification	Description	Frequency	
		Total	Percentage
Gender	Male	100	83.3
	Woman	20	16.7
Age	21 – 30	37	30.8
	31 – 40	63	52.5
	41 – 50	17	14.2
	More than 50	3	2.5
	Junir High School	1	0.8
Level of Education	Senior High School	86	71.7
	Diploma	5	4.2
	Bachelor	28	23.3
Lenght of Work	1 – 5	100	83.3

6 – 10	14	11.7
11 – 15	2	1.7
More than 15	4	3.3

Source: Primary Data Processed (2025)

Based on gender, there were 100 male respondents (83.3 %) and 20 female respondents (16.7%). These results indicate that the marketing team at Tumbakmas Niagasakti Company is male-dominated. This is also confirmed because one of the requirements requested to become a marketing team member is to be able to ride a motorbike or car. The age of respondents is dominated by the age of 31-40 years as much with 52% or 63 respondents, and the age of 21-30 is 30.8% (37 respondents). Marketing employees are dominated by the age range of 21-40, which is the same as the young adult age group. With this age dominance, marketing employees can become a great marketing team to achieve the company's goals. Meanwhile, in terms of education, the marketing employees at Tumbakmas Niagasakti Company are quite diverse, from junior high school to undergraduate level. Broadly speaking, it is dominated by high school education (71.7%, 86 respondents) and undergraduate education (23.3%, 28 respondents). There was only one respondent with a junior high school education level and five respondents with a diploma level of education. After searching through cross-tabulation, it turns out that respondents with the last education of junior high school are between 40-50 years old with a work period of more than 15 years. This shows that these respondents were long-time employees with high loyalty. The positions in the marketing department of Tumbakmas Niagasakti Company are quite diverse because Tumbakmas Niagasakti Company is a distribution company with many brands. In general, the distribution of positions is dominated by sales vans and presell sales. Based on the length of service, respondents were dominated by a work period of 1-5 years as many with 100 respondents (83 %), followed by 14 respondents (11.7 %) with a work period of 6-10 years. Only four respondents (3.3%) had a work period of more than 15 years.

4.2. Validity Test

This study examined the validity of the indicators for three variables: transformational leadership, employee efficiency, and knowledge sharing. For transformational leadership, all four item indicators (TL 1-TL 4) demonstrated loading values above 0.5, indicating their validity. For employee efficiency, the initial five indicators were tested, with EE5 exhibiting a loading value below 0.5 and thus deemed invalid. After removing EE5 and conducting a retest, the remaining four item indicators (EE 1-EE 4) were found to have valid loadings. Finally, all six item indicators (KS1-KS6) for knowledge sharing were found to have valid loadings above 0.5. The validity results are shown in Table 2.

Table 2. Validity Test Result

Item Indicator	Transformational Leadership (TL)	Employee Efficiency (EE)	Knowledge Sharing (KS)
TL1	0.788		
TL2	0.743		
TL3	0.530		
TL4	0.778		
EE1		0.717	
EE2		0.727	
EE3		0.756	
EE4		0.676	
KS1			0.654
KS2			0.670
KS3			0.633

KS4	0.795
KS5	0.780
KS6	0.729

Source: Primary Data Processed (2025)

4.3. Reliability Test

Reliability can be determined through the convergent validity value, which can be seen through the composite variable and Cronbach's alpha values. It is considered reliable when the value is above 0.5 or more (Ju et al., 2018). The processed data show that all variables are reliable because the value is above 0.5. The data are presented in Table 3.

Table 3. Reliability Test Result

Variable	Cronbach's Alpha	Composite Reliability
Transformational Leadership	0.677	0.806
Employee Efficiency	0.689	0.811
Knowledge Sharing	0.804	0.860

Source: Primary Data Processed (2025)

4.4. Model Test

Model testing was performed by assessing the Goodness of Fit criteria. Three criteria must be met for a model to be considered fit. The first criterion is the Average Path Coefficient (APC) model, which is considered fit if the p-value < 0.001. The second criterion is that the Average R-squared (ARS) model is considered fit if the p-value < 0.001. The last criterion is the Average Block VIF (AVIF), which is considered fit if the model result is less than 5. The results are presented in Table 4.

Table 4. Model Test Result

Criteria	Requirements	Conclusion
Average Path Coefficient (APC)	p-value < 0.001	0.513 p-value < 0.001
Average R-squared (ARS)	p-value < 0.001	0.544 p-value < 0.001
Adjusted R-squared (ARRS)	p-value < 0.001	0.539 p-value < 0.001
Average Block VIF (AVIF)	< 5	2.446
Goodness of Fit	Strong > 0.360	0.538

Source: Primary Data Processed (2025)

4.5. Hypothesis Test

Hypothesis testing was conducted to determine the influence or relationship between independent variables and dependent variables. The level of significance used in this study was 5%, and the hypothesis was accepted if $p < 0.05$. The results are obtained from the hypothesis test results in Table 5.

Table 5. Hypothesis Test Result

Hypothesis	Path Coefficient	P Value
Transformational Leadership → Employee Efficiency	0.370	< 0.05
Transformational Leadership → Knowledge Sharing	0.660	< 0.05
Knowledge Sharing → Employee Efficiency	0.510	< 0.05
Transformational Leadership → Knowledge Sharing → Employee Efficiency	0.337	< 0.05

Source: Primary Data Processed (2025)

Table 5 shows that the path coefficient value between transformational leadership and employee efficiency is 0.379 and has a positive value with a p-value < 0.05. It is

concluded that transformational leadership has a positive effect on employee efficiency; therefore, the first hypothesis is accepted. Hypothesis two is accepted, with the path coefficient value between transformational leadership and knowledge sharing being 0.660 and having a positive value with a p-value < 0.05. Furthermore, the hypothesis is accepted with a coefficient value of 0.510 and is positive, with a p-value < 0.05. The mediation relationship was determined by examining the direct and indirect effects of the test results. The test results obtained that the value of the indirect relationship between transformational leadership and knowledge sharing is 0.337 with a p-value < 0.05. These results suggest that employee efficiency mediates the relationship between transformational leadership and knowledge sharing. Therefore, the results show that hypothesis four which states that knowledge sharing mediates the relationship between transformational leadership and employee efficiency, is accepted.

4.6. Discussion

4.6.1. The Effect of Transformational Leadership on Knowledge Sharing

The results of this study show that transformational leadership has a positive effect on knowledge sharing. These results are consistent with those of previous studies (Dwivedi et al., 2020; Prikshat et al., 2023). These results indicate that the higher the transformational leadership, the higher the knowledge sharing. With transformational leadership, employee motivation, trust, and learning will increase, and knowledge sharing will also increase. Transformational leaders can increase the motivation of team members to share knowledge by providing clear goals, constructive feedback, and a positive work environment. High trust between leaders and team members is a key factor in encouraging knowledge sharing. Transformational leaders can build trust through transparency, honesty, and consistency in action. The results of this study are consistent with previous findings (Dwivedi et al., 2020; Yin et al., 2020), which show that knowledge sharing practices initiated by leaders significantly increase team effectiveness and efficiency. Furthermore, this study confirms the findings of international research (Li et al., 2014; Liu & Li, 2018), which show that transformational leadership plays an important role in encouraging knowledge sharing. An in-depth analysis of data from 186 leader-follower pairs in a Chinese real estate company revealed that psychological safety and team efficacy fully mediate the impact of transformational leadership on knowledge sharing, particularly through the dimensions of intellectual stimulation, inspirational motivation, and individualized consideration. These findings provide strong empirical support for the positive relationship between transformational leadership and knowledge sharing across organizational contexts.

4.6.2. Effect of Transformational Leadership on Employee Efficiency

Based on the data processing above, it can be seen that transformational leadership positively affects employee efficiency. These results indicate that the higher the transformational leadership, the higher the employee efficiency. Transformational leadership is consistently associated with increased employee performance, including efficiency and quality of work. These results are consistent with those of previous studies (Bastari et al., 2020; Dwivedi et al., 2020; Al-Tit et al., 2022). Employees who work under transformational leadership tend to have lower turnover rates, which means they stay longer in the organization and contribute to increased efficiency in the long term. The findings of transformational leadership have a significant positive impact on employee performance, affecting productivity, work quality, job satisfaction, and organizational commitment, as supported by previous research (Rony et al., 2023).

This review identifies the mechanisms by which transformational leadership operates, such as building a strong organizational vision, creating a supportive work environment, and fostering strong interpersonal relationships. Transformational leaders also foster employee creativity (Shafi et al., 2020), and employees feel satisfied. Employees who are satisfied with their jobs tend to be more productive and efficient. Therefore, effective transformational leadership is important for improving employee performance and organizational success.

4.6.3. The Effect of Knowledge Sharing on Employee Efficiency

The results of the data analysis showed a significant positive correlation between knowledge sharing practices and increased employee efficiency. This finding indicates that when employees actively share their knowledge and experiences, productivity and output quality increase, and the time required to complete tasks decreases. This shows that knowledge sharing not only enriches individual insights but also creates positive synergies that contribute to increasing the overall organizational efficiency. These results are consistent with those of previous studies (Dwivedi et al., 2020; Vandavasi et al., 2020). These results are in line with previous research findings in the hotel industry (Kuzu & Özilhan, 2014), which showed a positive relationship between transformational leadership and employee performance. These findings indicate that the influence of transformational leadership on employee performance is consistent and can be generalized to various industries.

4.6.4. The Mediating Role of Knowledge Sharing on The Effect of Transformational Leadership and Employee Efficiency

The results of this study provide strong empirical evidence that knowledge sharing acts as a significant mediator between transformational leadership and employee efficiency. This finding is consistent with previous research (Dwivedi et al., 2020), confirming that the effect of transformational leadership on employee efficiency is largely explained by the mechanism of knowledge sharing. In other words, when transformational leaders encourage and facilitate knowledge sharing in an organization, they create a work environment that allows employees to learn from each other, improve their skills, and find innovative solutions, thus directly contributing to increased efficiency. These results have significant implications for management practices, where organizations need to focus on developing a strong knowledge-sharing culture. However, this study has several limitations; therefore, further research is needed to confirm these findings in different contexts and to further investigate the mechanisms underlying this relationship.

5. Conclusion

The results of this study contribute to the development of theories on transformational leadership, knowledge management, and employee performance. Theoretically, the results of this study provide additional evidence of the mechanism behind the influence of transformational leadership on employee performance, especially employee efficiency. By identifying knowledge sharing as a mediating variable, this study refines the existing theoretical model, showing that transformational leadership not only directly affects performance but also indirectly through social and cognitive mechanisms. The results of this study provide strong empirical evidence of the positive relationship between transformational leadership, knowledge sharing, and employee efficiency. By creating a supportive and motivating work environment, transformational leaders successfully

encourage employees to share their knowledge and experience. This, in turn, increases employee efficiency in completing the organizational tasks. These findings confirm the central role of knowledge sharing as a mechanism linking transformational leadership to improved performance.

The managerial implication is that to increase efficiency and innovation, organizations need to focus on developing a strong knowledge-sharing culture. This can be achieved through transformational leadership training, developing an online platform for knowledge sharing, and recognizing and rewarding employees' contributions. Further research should examine the moderating role of factors such as a safe psychological climate, flexible organizational structure, and the use of information technology in mediating the relationship between the research variables. In addition, longitudinal research should be conducted to test the stability of these relationships over the long term.

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