Exploring the Interpaly of Transformational and Transactional Leadership on Employee Performance: The Mediating Role of Knowledge Sharing

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Abstract

This study explores the interplay between transformational leadership (TFL) and transactional leadership (TSL) on employee performance (EMP), with specific focus on knowledge sharing (KNS) as a mediating factor. Data were collected from 200 employees through a survey questionnaire, and the research hypotheses were investigated using Partial Least Squares Structural Equation Modeling (PLS-SEM) algorithm and bootstrapping method. The findings indicate that TFL and TSL are positively related to EMP. However, KNS's intervention in TFL and EMP is higher than in TSL and EMP. Additionally, transformational leadership is more effective in fostering knowledge-sharing behaviors than transactional leadership, reinforcing its role in driving knowledge-based performance improvements. The study underscores the critical role of knowledge sharing in leadership and employee task performance and innovation work behavior. This study contributes to the broader discourse on leadership effectiveness and employee performance in the higher educational sector.

Keywords: Transformational Leadership, Transactional Leadership, Knowledge Sharing, Employee Performance, Public Universities

Introduction

The problem with Africa is that, as skilled workers leave the continent in search of better opportunities in Europe and America, the continent has experienced a brain drain. According to Kusi et al. (2020), prevalence of uncompetitive workplaces have had a detrimental effect on workers' performance and motivation to stay with the organization. In 2024, Akaeze underscored the importance of leadership in improving faculty members' performance and curbing brain drain in Nigeria's public universities. Thus, employee performance is influenced by leadership styles through knowledge-sharing behaviors. When leaders create an

environment that promotes knowledge exchange, employees experience increased job satisfaction, productivity, and innovation (Alzghoul et al., 2024).

The interplay between transformational and transactional leadership has become a key focus in the quest to understand how leadership styles influence employee performance. Both approaches provide unique mechanisms that, when combined, can yield a profound impact on employee outcomes. While transformational leadership motivates employees by aligning them with broader organizational goals, transactional leadership emphasizes task completion through rewards and penalties. Therefore, the synergy between these two leadership styles is most effective when mediated by knowledge-sharing behaviors. The exchange of knowledge within organizations serves as a critical facilitator, transforming leadership directives into concrete performance improvements.

Transformational leadership style is characterized by the ability to inspire and motivate employees to exceed their expectations, driving them to pursue organizational goals. A key aspect of transformational leadership is its facilitation of knowledge sharing, which serves as a mediating mechanism between leadership practices and employee performance. Between 2020 and 2024, numerous studies have explored how transformational leadership shapes employee behavior, particularly through the role of knowledge sharing. Leaders who adopt this style focus on broadening their followers' goals, instilling in them a sense of belonging and loyalty to the organization's objectives. Such leaders inspire their employees by demonstrating a strong vision, offering personalized support, and fostering a culture of innovation and openness. Khassawneh et al. (2022) averred that employee trust in transformational leaders encourages knowledge sharing, which directly enhances creativity and performance. Leaders' openness to new ideas and participative decision-making processes allows employees to feel valued, resulting in higher commitment and performance levels. Moreover, transformational leadership encourages employees to collaborate, share information, and improve their productivity through innovation (Sudibjo & Prameswari, 2021). This collaborative environment promotes a sense of ownership and involvement, which is linked to better employee outcomes and organizational efficiency.

On the other hand, transactional leadership, rooted in structured exchanges between leaders and employees, emphasizes task completion, rewards, and penalties, making it a key driver of employee performance in many organizations. Transactional leadership is designed around clear expectations and the enforcement of organizational goals through rewards and punishments. This leadership style focuses on defined roles, ensuring that employees meet specific performance standards. Transactional leaders tend to prioritize short-term productivity and efficiency by aligning rewards with employee compliance to set tasks. As a result, employee performance improves through goal-oriented directives, clearly defined responsibilities, and motivation driven by incentives. In recent years, studies have explored how the effectiveness of transactional leadership can be enhanced through the mediating role of knowledge sharing, especially in dynamic work environments where collaboration and innovation are crucial.

However, despite these benefits, transactional leadership's focus on rigid task fulfillment may limit its effectiveness in knowledge-driven industries where innovation and continuous

improvement are critical. The structure and order provided by transactional leadership can create predictable results, but it may not stimulate creativity or knowledge exchange without additional interventions.

Therefore, knowledge sharing is recognized as a vital mediator between leadership styles and employee performance. It is the process through which employees exchange information, experiences, and ideas to solve problems or improve work outcomes. Knowledge sharing is especially important in environments where complex tasks require collective intelligence and collaboration. Several studies have demonstrated that knowledge sharing enhances the impact of transactional leadership on employee performance. Laksono (2023) found that knowledge-sharing behaviors mediate the relationship between organizational culture and employee performance, as well as between learning organizations and performance outcomes.

Moreover, leaders who promote open communication and trust within the transactional framework can foster an environment where employees feel motivated to share information, thus improving individual and collective performance. Employees are more likely to share their knowledge and expertise when they trust their leaders and believe that sharing will be reciprocated or rewarded. In transactional leadership, this trust is often built through the consistent application of rewards and recognition for contributions to organizational knowledge. While transactional leadership is traditionally viewed as task-focused and performance-oriented, the incorporation of knowledge sharing transforms it into a more dynamic leadership style that supports innovation. When employees are encouraged to share their ideas and expertise, transactional leaders can leverage these contributions to drive innovation and improve organizational effectiveness. For example, Kmieciak (2021) found that a knowledge-sharing climate strengthens the relationship between perceived organizational support (POS) and innovative behavior. Their study highlights that even in transactional settings, fostering a climate where knowledge is freely shared can lead to significant improvements in creativity and innovation.

Despite extensive research into the effects of both transformational and transactional leadership on employee performance, there remain significant gaps in understanding the nuance interplay between these leadership styles, particularly through the mediating role of knowledge sharing. The lack of integration between leadership styles, knowledge sharing, and performance outcomes presents a challenge for organizations seeking to optimize both short-term efficiency and long-term innovation. While transformational leadership is known to enhance employee motivation, engagement, and creativity, transactional leadership typically focuses on structured goal achievement and performance through rewards and penalties. What remains underexplored is how these leadership styles can complement one another to optimize employee performance, particularly in knowledge-intensive environments where collaboration and innovation are critical. Moreover, it appears the circumstances under which knowledge sharing effectively mediates the relationship between leadership and performance outcomes in public tertiary institutions has received less attention from scholars. Therefore, the current study explores the how transformational and transactional leadership styles can be strategically combined to maximize employee performance, especially through the cultivation of knowledge-sharing practices. This gap indicates a broader issue in leadership research while both leadership styles have been individually linked

to employee outcomes, the interaction between them, mediated by knowledge sharing, is scant. Therefore, the purpose of the study is to investigate the mediating role of knowledge sharing in the interplay of transformational leadership, transactional leadership and employee performance in Public Universities in Ghana. Specifically, the study examines the relationship between transformational and transactional leadership styles and employee performance, analyzes the role of knowledge sharing, and compares the effectiveness of transformational and transactional leadership in fostering knowledge-sharing behaviors that improve employee performance.

Literature Review
Social Exchange Theory (SET)
Social Exchange Theory (SET), a sociological framework, seeks to illuminate human behavior in the context of interpersonal interactions, focusing on the benefits and drawbacks inherent in these relationships (Stafford & Kuiper, 2021). At its core, SET suggests that rational decision-making hinges on an individual's assessment of the advantages and disadvantages associated with engaging in these interactions, thus people are more inclined to sustain relationships when they believe that the benefits outweigh the costs (Zhang & Liu, 2022). This study intends to contribute to a deeper understanding of how TFL and KNS combine to produce a healthy atmosphere within such institutions by exploring the implications of SET in this particular scenario.

Transformational Leadership, Transactional Leadership and Employee Performance
Transformational leadership primarily enhances performance through intrinsic motivation and empowerment, while transactional leadership ensures structured goal achievement through external motivation (Aljumah, 2023). Magasi (2021)'s study of 325 employees in Tanzanian's banking sector showed that transformational leadership dimensions of personalized consideration and intellectual stimulation positively correlated with employee performance. Similary, Qalati et al. (2022)'s study of 405 employees of SMEs in Pakistan showed that transformational leadership exhibited a markedly positive correlation with organisational citizenship behaviour and employee performance, thus transformational leadership motivates employees to engage in discretionary work behaviors leading to increase in employee performance. Several studies have resulted in mixed conclusions on the interplay between transactional leadership and employee performance. For instance, Mahfouz et al. (2022) found an insignificant relationship between transactional leadership and employee performance. Similarly, Hadi et al. (2024) study found that transactional leadership was not positively related to employee performance. Additionally, Donkor et al. (2022)'s study of 330 employees in Ghana's public sector found that transactional leadership is negatively related to employee commitment thereby reducing employee performance. Contrarily, Alharbi et al. (2021) found that transactional leadership predicted employee performance, albeit the influence of transformational leadership on employee performance was higher. Handayani et al. (2022) also recorded a strong positive and significant effect of transactional leadership on employee performance in their study of 212 employees in Indonesia's stone milling companies.

Employee performance is the degree to which an employee can carry out his tasks and obligations correctly and successfully. It refers to innovative work behavior, work outputs, efficiency, quality, innovation, initiative, and attitude (Triansyah et al., 2023). While bad

employee performance can result in losses for the firm, good employee performance can help organizations more successfully achieve their goals. For organizations across a number of industries, increasing employee performance is a significant problem. Moreso, experts believe that performance is a degree that employees get at work and is connected to how well they execute duties and reach a particular set of objectives. Thus, the study hypothesizes that:

H_1: There is a significant relationship between TFL and EMP

H_2: There is a significant relationship between TSL and EMP

Knowledge Sharing (KNS), Transformational Leadership (TFL), and Employee Innovative Work Behavior and Task Performance (EMP)

Numerous studies have explored the relationship between TFL, KNS, and TSP, consistently suggesting that KNS plays a mediating role in this dynamic. For example, Asada et al. (2021) found that KNS partially influenced the interaction between TFL and TSP, with higher job satisfaction associated with a stronger connection between TFL and KNS. Similarly, a study Rafique et al., (2022), done at Higher Education institutions in Pakistan unveiled a significant correlation between TFL and KNS and IWB. Moreover, the study found that KNS had a moderating role in the association between Pandemic Job Stress (PJS) and IWB, as well as partially mediated the link between TFL and IWB. In another study conducted in Indonesia, Layaman et al., (2021) found proactive KNS to mediate the relationship between TFL and TSP. Collectively, these findings suggest that TFL can enhance TSP within organizations by fostering robust social interactions and promoting KNS among subordinates. By applying the principles of SET and cultivating a positive work environment, leaders can further enhance employee KNS, ultimately leading to improved TSP. Al-Husseini et al., (2021) conducted research in the context of Iraqi public universities and discovered a significant link between TFL and KNS, with KNS acting as a partial mediator in the connection between TFL and IWB. Similarly, Akram et al., (2018) discovered that KNS partially moderated the association between Organizational Justice (OJ) and IWB in a study involving 345 workers in a Chinese telecom business. The research showed a stronger relationship between OJ and KNS when workers showed higher degrees of affective commitment. Results from the study of indicate that KNS mediate the relationship between TFL and IWB among Indonesian workforce. Similar results were validated by the study of while depicting the relationship between TFL and IWB through 3 different meditational variables (Udin et al. 2022) where KNS was found to perform an intervening role in the relationship between TFL and innovation capability.

T

hese results support the SET tenets and imply that KNS mediates the relationship between TFL and EMP. By encouraging improved social interactions and KNS among employees, TFL can help workers with their IWB and TSP. Based on this body of literature, the research posits the following hypothesis:

H_3: Knowledge Sharing mediates the relationship between transformational leadership and employee performance.

Knowledge Sharing (KNS), Transactional Leadership (TSL), and Employee Performance (EMP)

The mediating role of knowledge sharing between transactional leadership and innovative work behavior (IWB) has been a focal point of recent organizational research. This relationship underscores how leadership styles focused on structure, compliance, and reward systems can indirectly foster task performance and innovation when knowledge-sharing

mechanisms are present. Employees who engage in knowledge sharing are more likely to identify new opportunities, develop innovative solutions within the constraints of their roles, and complete assigned tasks (Sharif et al., 2024). Again, it builds organizational intellectual capital, enabling employees to leverage collective knowledge for creative problem-solving. Transactional leaders can facilitate this by rewarding contributions to knowledge-sharing initiatives, as noted by Khoshnaw and Karadaş (2024). Haider et al. (2023) found that KNS directly enhances task innovation in environments led by transactional leaders. Employees use shared knowledge to refine processes, introduce efficiencies, and implement new ideas while meeting structured goals. In sectors like IT and R&D, where IWB is critical, transactional leadership paired with active knowledge-sharing practices can enhance innovation. Leaders who reward employees for sharing expertise create a culture that balances operational efficiency with creativity (Udin et al. 2022). In 2024, Sharif et al. found that voice behaviors combined with knowledge sharing led to significant improvements in service delivery innovation.

Asada et al., (2021) found that KNS partially influenced the interaction between TFL and TSP, with higher job satisfaction associated with a stronger connection between TFL and KNS. Furthermore Al-Husseini et al., (2021) demonstrated that KNS served as a strong mediator between TFL and innovation in the context of higher education institutions in Iraq. In another study conducted in an Indonesian work context, Layaman et al., (2021) proactive KNS was found to mediate the relationship between TFL and TSP. Collectively, these findings suggest that TFL can enhance TSP within organizations by fostering robust social interactions and promoting KNS among subordinates. By applying the principles of SET and cultivating a positive work environment, leaders can further enhance employee KNS, ultimately leading to improved TSP. By creating opportunities for collaboration and leveraging collective expertise, knowledge-sharing mechanisms transform structured leadership into a driver of creativity, problem-solving, and employee task performance. Based on this body of literature, the researcher proposes this hypothesis:
H_4: KNS mediates the relationship between TSL and EMP

Conceptualizing Transformational and Transactional Leadership in Employee Performance and the role of Knowledge Sharing
Leadership plays a pivotal role in shaping employee performance and overall organizational success. Among the various leadership styles, transformational and transactional leadership stand out as two of the most influential approaches in managing and motivating employees (Bass, 1985). While transformational leadership focuses on inspiring, empowering, and intellectually stimulating employees to exceed expectations, transactional leadership relies on a structured system of rewards and punishments to drive performance and maintain efficiency (Burns, 1978). Although several studies have examined the interplay of transformational leadership and transactional leadership on employee performance, it appears there exists significant gap in the role of knowledge sharing is underexplored. On the basis of literature reviewed and identified gaps,
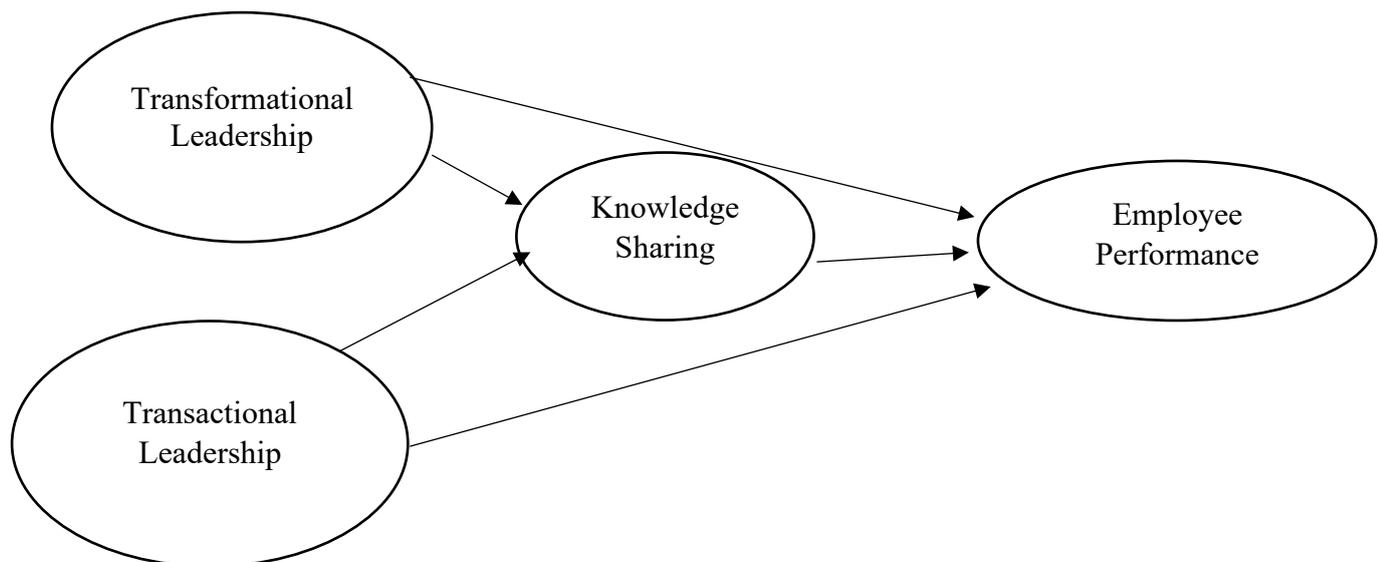
Conceptual Framework

This theoretical framework provides a structured basis for understanding how transformational and transactional leadership styles influence employee performance through the mediating role of knowledge sharing. By applying Social Exchange Theory, the study underscores the importance of reciprocal relationships in fostering knowledge-sharing behaviors that enhance overall organizational performance. This framework will guide the empirical analysis, testing the hypothesized relationships between leadership, knowledge sharing, and employee performance.

Methodology

The study as a systematic inquiry adopts a quantitative research approach to investigate the role of knowledge sharing in the interplay of transformational and transactional leadership on employee performance. Thus, it provides the basis for establishing the interrelationships and effects between exogenous and endogenous variables measured typically by using instruments of predetermined, close-ended questions so that numbered data can be analyzed using statistical procedures (Fischer et al., 2023). The correlational research design examined the relationships among transformational leadership, transactional leadership, knowledge sharing, and employee performance (Creswell, 2014). The target population consisted of academic and administrative staff of two public universities, one each from the northern and southern belts of Ghana.

A stratified random sampling technique was used to ensure representation from both academic and administrative staff. The sample size was determined using Hair et al. (2021), who posit that, when the maximum number of independent variables in the measurement and structural models is four, one would need 41 observations to achieve a statistical power of 80% for detecting R^2 values of at least 0.25 with a 5% probability of error (p.47). Thus, 200 participants from a population estimated at about 1000 permanent employees were randomly sampled from the strata of senior members, senior and junior staff of academic and non-academic departments, and units.

Measurement Instrument
The primary measurement instrument is a structured questionnaire designed to measure transformational leadership, transactional leadership, knowledge sharing, and employee performance. The Multifactor Leadership Questionnaire (MLQ) developed by Bass and Avolio (1995) is used to assess leadership styles, while knowledge sharing and employee performance are measured using scales adapted from previous research (Podsakoff et al., 2003).

Research Instrument
One method of data collection is the use of questionnaire. This is to ask individuals a series of questions to obtain statistically useful information about a particular topic at a given time. The questionnaire data collection method is the most commonly adopted method. It is mostly observed as an effective tool for data collection, especially when studying the perception and opinion of individuals on the field of study. Questionnaire that is designed effectively is indispensable to get a good and reliable result in every social research. Depending on the research objective and the research problem, a questionnaire refers to the support that includes communication between the person collecting the information known as a researcher and the person answering the known question of the respondent (Saunders et al., 2019). The questionnaire is divided into four sections:
1. Demographic Information: Age, gender, position, years of service.
2. Transformational Leadership: Items adapted from the MLQ (e.g., "My leader articulates a compelling vision of the future").
3. Transactional Leadership: Items from the MLQ (e.g., "My leader focuses on irregularities, mistakes, exceptions, and deviations from standards").
4. Knowledge Sharing and Employee Performance: Items measuring the frequency and quality of knowledge sharing and perceived employee performance (e.g., "I regularly share knowledge with my colleagues"; "My performance meets the expectations of my role").

Results and Discussion
Introduction
The descriptive statistics table provides insight on the demographic characteristics of the respondents as shown in Table 1.

Table 1

Demographic Characteristics

VARIABLE	CATEGORY	FREQUENCY	PERCENTAGE
Age	Below_30_years	17	8.50
	30_39_years	91	45.50
	40_49_years	59	29.50
	50_59_years	31	15.50
	Above_60_years	2	1.00
Gender	Male	108	54.00
	Female	92	46.00
Marital status	Single	76	38.00
	Married	122	61.00
	Divorced	2	1.00
Qualification	Diploma	83	41.50
	HND	71	35.50
	Bachelor degree	41	20.50
	Master_degree	5	2.50
Experience	1_5_years	73	36.50
	6_10_years	56	28.00
	11_15_years	43	21.50
	16_20_years	3	1.50
	20_years_and_above	25	12.50
Position	Managerial	123	61.50
	Non-managerial	77	38.50

Source: Author's construct, 2025

The age distribution indicates that most respondents fall within the 30–39 age bracket (45.5%), followed by those aged 40–49 (29.5%), suggesting that the workforce is primarily composed of middle-aged employees. A smaller proportion of respondents are either younger than 30 (8.5%) or older than 50, with only 1% above 60. Gender distribution shows a nearly balanced workforce, with 54% male and 46% female respondents. Marital status statistics reveal that a majority (61%) are married, while 38% are single, and only 1% are divorced. Regarding educational qualifications, the highest proportion of respondents hold a diploma (41.5%), followed by those with an HND (35.5%), while a smaller percentage possess a bachelor's degree (20.5%) and a master's degree (2.5%). Work experience data indicates that most employees have between 1–5 years (36.5%) or 6–10 years (28%) of experience, with fewer employees having 11–15 years (21.5%), and only 1.5% and 12.5% falling in the 16–20 years and 20+ years categories, respectively. Lastly, the job position distribution highlights that a majority (61.5%) of the respondents hold managerial roles, while 38.5% occupy non-managerial positions, suggesting a workforce with a relatively high level of leadership representation.

Discussion on Factor Loadings and Construct Validity

Factor loadings are a key component in confirmatory factor analysis (CFA) and structural equation modeling (SEM). They represent the strength of the relationship between an observed variable (indicator/item) and its underlying latent construct (factor). In simpler terms, factor loadings indicate how well each item measures the construct it is intended to represent.

Table 2

Factor loadings of the items used in the construction of each construct.

Indicator	Transfor_ leadership	Transac_ leadership	Knowledge_ sharing	Employee_ perform.
EMP1				0.7415
EMP2				0.8209
EMP3				0.7724
EMP4				0.8180
EMP5				0.7948
EMP6				0.7863
EMP7				0.8398
EMP8				0.8787
KNS1			0.8421	
KNS2			0.8851	
KNS3			0.8704	
KNS4			0.9306	
KNS5			0.8827	
KNS6			0.8649	
KNS7			0.9257	
KNS8			0.8170	
TFL1		0.9145		
TFL2		0.5151		
TFL3		0.6249		

TFL4		0.7634	
TFL5		0.7898	
TFL6		0.7240	
TFL7		0.9123	
TFL8		0.7522	
TSL1	0.7991		
TSL2	0.8446		
TSL3	0.7385		
TSL4	0.8293		
TSL5	0.8396		
TSL6	0.7365		
TSL7	0.7980		
TSL8	0.8244		

Source: Author's construct, 2025

Therefore, ≥ 0.7: Indicates strong reliability and validity of the indicator. Items with loadings above 0.7 are considered excellent measures of the construct; ≥ 0.5 to < 0.7: Indicates moderate reliability. While not ideal, such items are often retained if they contribute to the theoretical meaning of the construct, especially in exploratory research, and < 0.5: Indicates weak reliability. Such items are typically removed from the model unless there is a strong theoretical justification for their inclusion. These thresholds are widely supported in the literature. For example, Hair et al. (2019) recommend that factor loadings should ideally be ≥ 0.7 for a well-defined construct, but values ≥ 0.5 are acceptable in exploratory research or when the construct is complex. Additionally, Comrey and Lee (1992) suggest that loadings above 0.55 are considered good, while those above 0.71 are excellent.

In the context of this study, the factor loadings for Employee Performance (EMP), Knowledge Sharing (KNS), Transformational Leadership (TFL), and Transactional Leadership (TSL) provide information into the reliability and validity of the constructs used. According to Hair et al. (2021), loadings above 0.70 are considered strong indicators of construct validity, while values between 0.50 and 0.69 are considered moderate but acceptable in exploratory studies. In this study, the factor loadings for EMP and KNS are particularly strong, with most items exceeding 0.80, confirming that the measured items accurately reflect the underlying constructs. The high factor loadings for KNS suggest that knowledge sharing is a well-defined

and highly reliable mediating variable in the relationship between leadership styles and employee performance.

For Transformational Leadership (TFL) and Transactional Leadership (TSL), most items demonstrate strong loadings above 0.70 as shown in Table 2, signifying that these constructs are also well-defined. However, two items in the TFL construct (TFL2 = 0.5151 and TFL3 = 0.6249) fall below the recommended threshold of 0.70 but are still within the range of 0.50 and 0.69 thus, they can be considered moderate and acceptable in exploratory studies. In contrast, TSL exhibits consistently strong loadings, reinforcing the reliability of transactional leadership as a construct in the study. From Table 2, KNS serves as a strong mediator between leadership styles and employee performance. The high factor loadings within KNS confirm that knowledge-sharing behaviors significantly contribute to enhancing employee performance under different leadership styles.

Model Fit and Explanatory Power (R-Squared Values)
The R-squared (R^2) values indicate the proportion of variance explained by the independent variables. The model explains 73.56% of the variance in knowledge sharing (R^2 = 0.7356, Adjusted R^2 = 0.7329) and 83.23% of the variance in employee performance (R^2 = 0.8323, Adjusted R^2 = 0.8298). These high values suggest a strong explanatory power, confirming that transformational and transactional leadership, along with knowledge sharing, significantly predict employee performance. The results reinforce the argument that leadership styles play a crucial role in shaping workplace knowledge-sharing behavior, which in turn drives employee success.

Table 3

Model Fit and Explanatory Power (R-Squared Values)

R-Squared Construct	Coefficient of determination (R^2)	Adjusted R^2
Knowledge Sharing	0.7356	0.7329
Employee Performance	0.8323	0.8298

Source: Author's computation, 2025   ***p< 0.01, ** p< 0.05 , * p < 0.1

Reliability and Validity of Constructs
Reliability and validity are essential in evaluating the robustness of constructs used in research. Table 4 presents the Cronbach's Alpha (α), Composite Reliability (CR), and Average Variance Extracted (AVE) for the constructs of Transformational Leadership (TFL), Transactional Leadership (TSL), Knowledge Sharing (KNS), and Employee Performance (EMP). According to Hair et al. (2019), Cronbach's Alpha and Composite Reliability (CR) values above 0.70 indicate strong internal consistency, meaning that the items within a construct reliably measure the same concept. In this study, all constructs surpass this threshold, confirming a high level of internal reliability.

The results in the table demonstrate that all constructs exhibit strong reliability and satisfactory convergent validity. For TFL, Cronbach's alpha (α) and composite reliability (CR) are both 0.9257, exceeding the 0.70 threshold, which indicates excellent internal consistency, AVE of 0.5776, showing that over 57% of the variance in its indicators is explained by the construct, confirming convergent validity. TSL also shows high reliability, with α = 0.8931 and

CR = 0.8943, while its AVE of 0.6436 suggests that the construct explains about 64% of the variance in its items. Knowledge sharing (KNS) reliability scores are the highest among all constructs (α = 0.9609, CR = 0.9602), and the AVE value of 0.7710 indicates strong convergent validity, meaning that its measurement items are highly correlated and consistent. Finally, EMP shows excellent internal consistency (α = 0.9457, CR= 0.9464) and a strong AVE of 0.6521, confirming that its indicators are reliable and represent the construct effectively. Hence, all constructs exceed the recommended thresholds (α and CR > 0.70; AVE > 0.50), demonstrating that the measurement model has high reliability and good convergent validity across all variables. In sum, the findings in Table 4 confirm that the constructs used in the study are statistically robust and suitable for hypothesis testing. The results align with Hair et al., 2019; Fornell & Larcker, 1981, affirming the reliability of leadership styles, knowledge sharing, and employee performance as key variables.

Table 4
Indicators of construct reliability and convergent validity

	Construct Reliability		Convergent Validity
	Cronbach's alpha(α)	Jöreskog's rho (ρ_c)	AVE
Transfor_ leadership	0.9257	0.9257	0.5776
Transac_ leadership	0.8931	0.8943	0.6436
Knowledge_ sharing	0.9609	0.9602	0.7710
Employee_ perform.	0.9457	0.9464	0.6521

Source: Author's construct, 2025

The Fornell-Larcker criterion establishes that the square root of a construct's Average Variance Extracted (AVE) should be higher than its correlations with other constructs. The results confirm that Transformational Leadership (TFL), Transactional Leadership (TSL), Knowledge Sharing (KNS), and Employee Performance (EMP) are conceptually distinct, as each construct's √AVE value is greater than its inter-construct correlations. This implies that knowledge sharing and leadership styles influence employee performance without statistical redundancy, strengthening the theoretical framework of the study. Additionally, TSL and TFL remain separate constructs, highlighting that transformational and transactional leadership are distinct leadership paradigms with different impacts on knowledge sharing and performance.

Further validation is provided by the HTMT ratio, which measures construct differentiation by comparing the heterotrait (between constructs) and monotrait (within constructs) correlations (Henseler et al., 2015). The HTMT values in Table 5 fall below the 0.90 threshold, reinforcing that the constructs are well-differentiated. The table shows the results for discriminant validity using two methods — the HTMT ratio and the Fornell–Larcker criterion. This shows that Transformational Leadership, Transactional Leadership, Knowledge Sharing, and Employee Performance measure separate concepts. Also, the diagonal values (in brackets) are higher than the other values in their rows and columns. This satisfies the

Fornell–Larcker criterion, further confirming that each construct shares more variance with its own indicators than with other constructs. Thus, the results show that the model has good discriminant validity and the variables are distinct and do not overlap.

Table 5
Discriminant Validity

Heterotrait-Monotrait Ratio of Correlations (HTMT) and [**Fornell-Larcker Criterion]**				
	Transfor_ leadership	**Transact_ leadership**	**Knowledge_ sharing**	**Employee_ perform.**
Transfor_ leadership	[0.8062]			
Transac_ leadership	**0.6364** [0.4093]	[0.6806]		
Knowledge_ Sharing	**0.6418** [0.4135]	**0.7287** [0.5296]	[0.8013]	
Employee_ Perform.	**0.5999** [0.3592]	**0.6635** [0.4451]	**0.6820** [0.4674]	[0.8549]

Source: Author's construct, 2025   **Note:** Fornell-Larcker Criterion in brackets

Research Findings and Discussion
Table 6 presents the direct, indirect, and total effects of KNS in the relationship between TFL, TSL, and EMP. The direct effect assesses the unmediated impact of leadership styles on employee performance.

Table 6
Interplay of transformational and transactional leadership on employee performance with the mediating role of knowledge sharing.

	Coefficient		
Effect	**Indirect**	**Direct**	**Total**
Transfor_leadership -> Employee_perform.	0.5123***	0.1775**	0.6898***
Transac_leadership -> Employee_perform.	0.0900**	0.1533**	0.2433***
Transfor_leadership -> Knowledge_sharing		0.7760***	0.7760***
Transac_leadership -> Knowledge_sharing		0.1363**	0.1363**
Knowledge_sharing -> Employee_perform.		0.6601***	0.6601***

Hypothesis	**Path Description**	**Indirect Coefficient**	**Direct Coefficient**	**Total**	**interpretation**
H$_1$	TFL->EMP		0.1775**		Supported
H$_2$	TSL->EMP		0.1533**		Supported
H$_3$	KNS X TFL->EMP	0.5123***		0.6898***	Supported
H$_4$	KNS X TSL->EMP	0.0900**		0.2433***	Supported

Transformational leadership exhibits a positive and significant direct effect on EMP (β = 0.1775, p < 0.05), which, although statistically significant, is substantially lower than its

indirect effect. Thus, the study fails to reject the hypotheses "*there is a significant relationship between TFL and EMP*", "*there is a significant relationship between TSL and EMP*".

This implies that while transformational leadership independently enhances employee performance, its primary mechanism of influence is through knowledge sharing rather than direct motivational factors. In contrast, transactional leadership also has a positive and significant direct effect of $\beta = 0.1533$ ($p < 0.05$), which is slightly higher than its indirect effect but still moderate.

Mediating Role of Knowledge Sharing
The indirect effect represents how knowledge sharing (KNS) mediates the relationship between leadership styles and employee performance (EMP). Table 6 shows that transformational leadership (TFL) has a strong and significant positive indirect effect on EMP ($\beta = 0.5123$, $p < 0.01$), confirming that a substantial portion of its influence on employee performance occurs through knowledge-sharing mechanisms. Hence, the hypothesis "*KNS mediates the relationship between TFL and EMP*" is supported.

In contrast, the indirect effect of transactional leadership (TSL) on EMP is lower ($\beta = 0.0900$, $p < 0.05$), suggesting that while transactional leaders can facilitate knowledge sharing through structured processes and incentives, the effect is weaker than that of transformational leadership. Therefore, hypothesis "*KNS mediates the relationship between TSL and EMP*" is supported. Additionally, transformational leadership has a higher total effect on employee performance ($\beta = 0.6898$, $p < 0.01$), confirming that it is the most effective leadership style in driving performance, primarily through knowledge-sharing mechanisms. This finding supports Bass (1985) and Birasnav (2014), who assert that transformational leadership fosters intrinsic motivation and a learning culture that enhances employee engagement and productivity. On the other hand, transactional leadership exhibits a total effect of $\beta = 0.2433$ ($p < 0.01$), which, while significant, is considerably lower than that of transformational leadership. This suggests that while transactional leadership remains an important driver of employee performance, its effects are more limited compared to transformational leadership. The higher total effect of transformational leadership indicates that organizations prioritizing transformational leadership strategies will likely see greater long-term improvements in employee performance, particularly through fostering a knowledge-sharing culture.

Discussion of Findings
The study demonstrates that both transformational and transactional leadership styles have significant positive effects on employee performance, but the influence of transformational leadership is notably stronger. Importantly, the mediating role of knowledge sharing (KNS) was found to be crucial, with transformational leadership impacting performance primarily through enhancing knowledge-sharing behaviors. This finding resonates with Al-Husseini et al., (2021)'s finding that KNS served as a strong mediator between TFL and innovation in the context of higher education institutions in Iraq and Layaman et al., (2021) who found proactive KNS to mediate the relationship between TFL and TSP. The study reinforces the dominant view that transformational leadership is more effective than transactional styles in modern, knowledge-driven workplaces.

Although transactional leadership, while statistically significant, exhibits weaker direct and indirect effects compared to transformational leadership. The lower impact observed here suggests that while transactional leadership remains relevant, it may be insufficient on its own in environments that demand high levels of collaboration, creativity, and knowledge exchange, as suggested by Khoshnaw and Karadaş (2024) and Haider et al. (2023) who found that KNS directly enhances task innovation in environments led by transactional leaders. Knowledge sharing emerged as a powerful mediator in the leadership–performance relationship, particularly for transformational leadership. The relationship between knowledge sharing and employee performance was very strong ($\beta = 0.6601$, $p < 0.01$), affirming the importance of fostering open, communicative cultures within organizations. This result aligns closely with Donate and de Pablo (2015), who found that knowledge management capabilities significantly enhance organizational performance, especially when leadership actively promotes sharing behaviors. Compared to transformational leadership, transactional leadership was less effective at stimulating knowledge sharing, suggesting that purely incentive-based or compliance-driven leadership approaches may lack the relational depth required to sustain a knowledge-sharing culture. These findings highlight that leadership strategies must go beyond transactional exchanges to build sustainable performance advantages through active knowledge management practices.

Also, TFL exerts a substantially stronger influence on knowledge-sharing behaviors ($\beta = 0.7754$, $p < 0.01$) than transactional leadership (TSL) ($\beta = 0.1363$, $p < 0.05$). Moreover, the total effect of TFL on employee performance (EMP) ($\beta = 0.6898$, $p < 0.01$) significantly surpasses that of TSL ($\beta = 0.2433$, $p < 0.01$), suggesting that transformational leadership is more effective in cultivating knowledge-driven performance outcomes. These findings are broadly consistent with existing empirical literature. For example, Bryant (2003) and Zhu et al. (2013) highlight that transformational leaders, by articulating a compelling vision and fostering trust, create an environment where knowledge sharing thrives. Similarly, Mittal and Dhar (2015) found that transformational leadership significantly promotes knowledge management practices, encouraging behaviors that extend beyond formal job requirements. Transactional leadership, by contrast, has been portrayed by Bass (1990) and subsequent studies as primarily motivating employees through contingent rewards and sanctions, mechanisms that may drive task completion but not necessarily voluntary knowledge sharing.
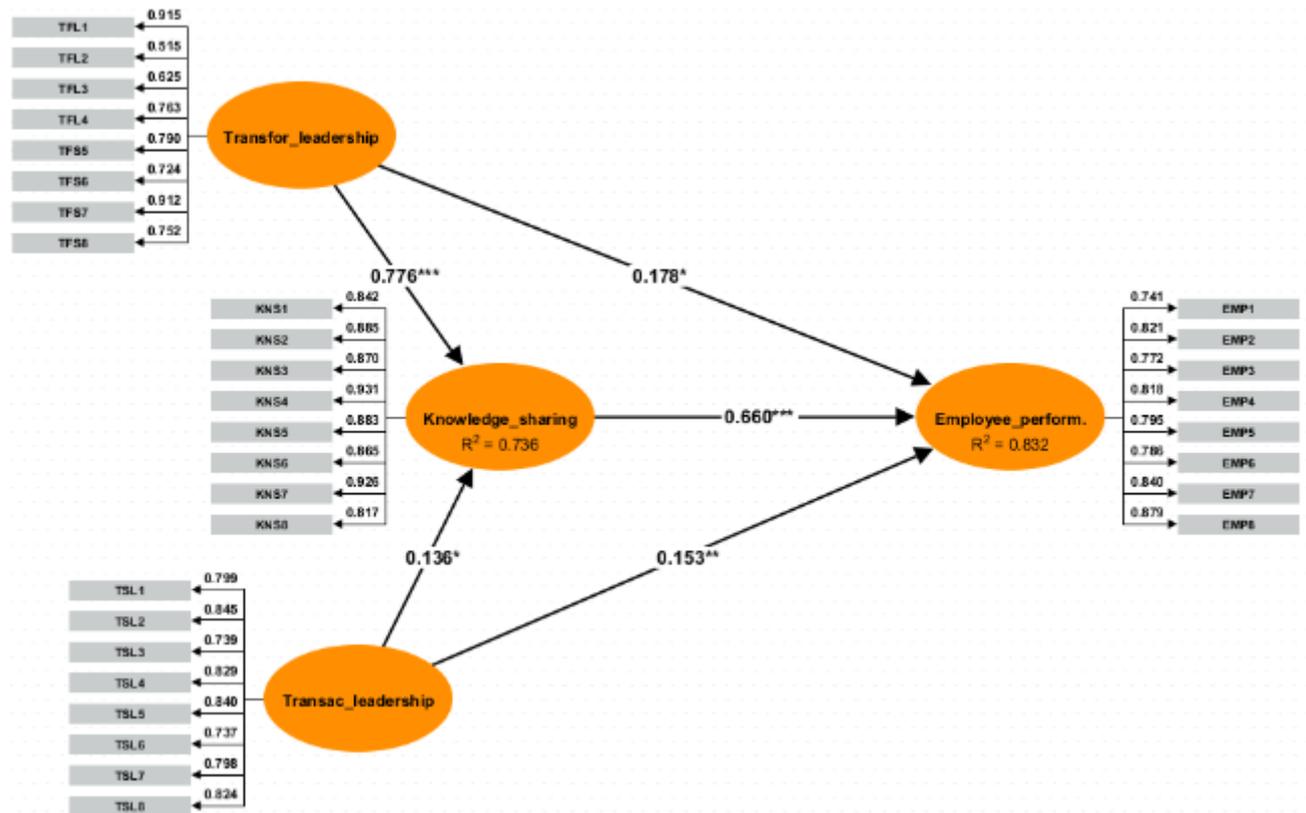
Figure 1: Path diagrams showing the regression coefficients and factor loadings.

Conclusion

This study provides strong empirical evidence that transformational leadership (TFL) is more effective than transactional leadership (TSL) in enhancing employee performance (EMP), primarily due to its significant impact on knowledge-sharing behaviors (KNS). The findings reveal that TFL fosters a work environment where employees feel encouraged to exchange knowledge, collaborate, and engage in innovative problem-solving, leading to sustained performance improvements. This is evident in the high indirect effect of TFL on EMP through, demonstrating that its influence is largely mediated by knowledge-sharing mechanisms rather than direct task execution. Conversely, TSL has a weaker indirect effect on EMP, suggesting that while transactional leadership contributes to structured performance improvements, it is less effective in fostering a knowledge-sharing culture. Additionally, the direct effect of TSL on EMP indicates that its primary impact comes from goal setting, performance monitoring, and rewards rather than intrinsic motivation or collaboration.

This study offers significant theoretical and contextual contributions by demonstrating that transformational leadership (TFL) enhances employee performance (EMP) more effectively than transactional leadership (TSL), primarily through the mediating role of knowledge sharing (KNS). The findings extend transformational and transactional leadership frameworks and draw upon social exchange theory (Blau, 1964) to explain how transformational leaders foster trust, collaboration, and innovation that translate into improved performance. Knowledge sharing emerges as a critical behavioral mechanism linking leadership and performance, reinforcing its centrality in contemporary organizational effectiveness. The comparatively weaker influence of TSL further clarifies its limitations in promoting intrinsic

motivation and collective learning. Contextually, the study highlights the importance of transformational behaviors in knowledge-driven and dynamic environments, particularly within emerging economies. Overall, the study bridges the leadership and knowledge management literatures, emphasizing that leadership effectiveness in modern organizations depends not only on task execution but also on the facilitation of knowledge exchange and continuous learning.

Implications for Theory and Practice

The study reveals that transformational leadership (TFL) and transactional leadership (TSL) are positively related to employee performance. Also, knowledge sharing (KNS) moderates the effects TFL and TSL on employee task performance and innovative work behavior. These findings have significant policy and managerial implications. Thus, university management should implement formal transformational leadership training programs targeted at university administrators, department heads, and teaching and non-teaching staff. These training programs should focus on vision-setting, intellectual stimulation, and mentorship, equipping leaders with the skills to motivate and inspire employees beyond routine task execution. Additionally, universities can integrate annual leadership assessments to evaluate administrators' effectiveness in implementing transformational leadership practices. By embedding these leadership principles within faculty development programs, the university can cultivate a work culture that fosters collaboration, motivation, and long-term engagement among employees.

The study also highlights the importance of knowledge sharing in driving employee performance. To enhance knowledge exchange, universities should establish digital platforms where employees can collaborate and share ideas. Encouraging interdepartmental knowledge-sharing programs, such as research symposiums, faculty mentorship programs, and peer-learning initiatives, will further strengthen collective learning. Additionally, the university should integrate knowledge-sharing contributions into staff performance evaluations, ensuring that employees are recognized and rewarded for their efforts in building a culture of continuous learning and professional development. These measures will create a more engaged and innovative workforce that thrives on collaborative knowledge-sharing practices. The application of the Social Exchange Theory (SET) to the findings highlights the benefits management and employees gain when TFL and TSL are deployed in work environments where there is collaboration through knowledge sharing, thereby improving employee performance.

While TSL remains an important tool for enforcing accountability and maintaining stability, organizations should prioritize transformational leadership practices that promote a culture of innovation and knowledge exchange. By investing in leadership development programs that train managers to adopt transformational behaviors, organizations can leverage the power of knowledge-sharing networks to build a high-performance workforce, ensuring long-term organizational success and competitiveness.

The study also highlights the importance of knowledge sharing in driving employee performance, thus, encouraging interdepartmental knowledge-sharing programs, such as research symposiums, faculty mentorship programs, and peer-learning initiatives, will further

strengthen collective learning creating a more engaged and innovative workforce that thrives on collaborative knowledge-sharing practices.

To institutionalize these leadership and knowledge-sharing improvements, universities should establish a Leadership and Knowledge Management Research Centers
These recommendations collectively provide a comprehensive strategy for enhancing leadership effectiveness and fostering a culture of knowledge sharing within universities. By implementing these policies, the university will create an academic environment where employees are empowered, motivated, and continuously improving their performance, ultimately strengthening institutional success and long-term sustainability.

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