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The Impact of Leadership Support and Communication on Employee Engagement and Working Environment: The Intermediating Role of Performance Management Systems in the UAE Public Sector

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ABSTRACT

This study investigates the mechanisms through which leadership behaviours, specifically leadership support (LS) and leadership communication (LC), influence employee engagement (EE) within the administrative context of the UAE ministry of education. It specifically examines the dual mediating roles of performance management systems (PMS) and the working environment (WE). A quantitative research design was employed, utilizing partial least squares structural equation modeling (PLS-SEM) to analyze data from 319 administrative personnel. The study grounded its hypotheses in social exchange theory and open systems communication theory. Descriptive statistics revealed a highly positive administrative climate (mean = 4.4). The structural model assessment confirmed that the impact of leadership on engagement is significantly enhanced when filtered through formalized systems. Leadership communication emerged as the most critical predictor of engagement (total effect = 0.500). Critically, mediation analysis demonstrated that PMS and the working environment serve as vital structural bridges; LC significantly influences engagement through both PMS (β = 0.149, t = 3.235) and WE (beta = 0.213, t = 4.355). The findings suggest that in hierarchical public sector organizations, leadership intent must be institutionalized through performance management and environmental resources to effectively drive engagement. Importance-performance matrix analysis (IPMA) identifies leadership communication as a high-priority area for strategic development.

Keywords: Leadership Support, Leadership Communication, Performance Management Systems, Employee Engagement, UAE Public Sector
JEL Classifications: H83, M12, M54

1. INTRODUCTION

Public sector organizations in the United Arab Emirates (UAE) are undergoing rapid structural and cultural transformations to meet rising governance standards and enhance institutional efficacy (Almazrouei and Alnahhal, 2026). Within this evolving operational landscape, cultivating an optimal working environment and maximizing employee engagement have emerged as critical prerequisites for sustainable organizational performance (Alnuaimi, 2022). Empirical evidence underscores that achieving these favorable workplace outcomes relies heavily on strategic leadership behaviors, specifically the deployment of ongoing leadership support and clear, transparent leadership communication (Alnuaimi, 2022). However, public management literature suggests that this relationship is rarely direct; rather, it is operationalized and sustained through formal administrative control mechanisms (Semaihi et al., 2023). While the independent effects of leadership traits and employee attitudes are increasingly documented across the GCC region (Alnagbi et al., 2025), an empirical gap remains regarding how modern performance management systems (PMS) function as a critical intermediary mechanism to systematically channel leadership support and

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communication into optimized work environments and highly engaged public servants.

Employee engagement reflects the cognitive, emotional, and behavioral energy employees invest in their work, which in public organizations is heavily shaped by leadership and workplace conditions. Leaders significantly influence this engagement through social exchange processes, role modeling, emotional contagion, and the fulfillment of employees' psychological needs, thereby enhancing employee vigor, dedication, and absorption (Decuypere and Schaufeli, 2020). However, leadership does not operate in isolation; employees experience leadership through formal administrative frameworks and daily working conditions that structure organizational life. Performance management systems (PMS) can effectively translate leadership intent into goal clarity, feedback, developmental support, and perceptions of fairness. Longitudinal evidence shows that performance management and evaluation practices have a statistically significant effect on work engagement, while internal communication frameworks built around feedback dialogue and calibration mechanisms strengthen perceived fairness and strategic workplace behaviors (Awan et al., 2020; Ehmann et al., 2024; Micacchi et al., 2024).

Despite this growing body of research, three important gaps remain unaddressed. First, empirical evidence exploring these specific structural paths within Gulf and UAE public-sector settings remains relatively sparse, often sector-specific, or restricted to narrow organizational samples (Ibrahim and Al Falasi, 2014). Second, much of the broader literature treats leadership as a purely direct predictor of engagement, leaving the combined and differentiated roles of PMS and the working environment insufficiently examined. Third, public administration research has focused heavily on appraisal quality, justice, or performance consequences rather than explaining how a PMS functions as a structural mediating mechanism. Consequently, there is a lack of clarity on how leadership support and leadership communication are actively converted through a PMS into stronger employee engagement and a more supportive working environment (Ehmann et al., 2024; Micacchi et al., 2024).

Against this background, this study investigates how leadership support and leadership communication influence employee engagement and the working environment within the administrative context of the UAE ministry of education, while explicitly examining the mediating roles of PMS and the working environment. Drawing on social exchange theory and open systems communication theory, we argue that leadership generates engagement not only through direct interpersonal influence but also through formal systems and contextual workplace conditions that signal support, clarity, fairness, and developmental opportunity. The study therefore contributes to the literature in three ways: First, by integrating interpersonal leadership behaviors with structural mediating mechanisms like PMS; second, by extending empirical evidence from an underexamined Gulf public-sector context; and third, by offering actionable practical guidance for policymakers and managers seeking to improve public sector engagement through stronger communication frameworks and enabling workplace environments.

2. LITERATURE REVIEW

2.1. Leadership Communication

Employee engagement and working conditions can be positively influenced by leadership communication and play an important role across a range of industries and settings (Sonko, 2018). This holds true for the various government ministries in the United Arab Emirates, effective leadership, communication, and support will positively impact employee engagement, job satisfaction, and the overall work environment. Leaders who communicate effectively with their employees, provide direction and motivate them, foster higher levels of engagement and job satisfaction, ultimately leading to greater productivity and performance. According to Enyan et al. (2023), effective communication helps clarify expectations, reduce misunderstandings, and foster the collaboration between staff members, resulting in increased job satisfaction and a more enjoyable working environment. Terek et al. (2015) investigated the impact of leadership on communication satisfaction among primary school teachers in Serbia using survey data collected from 362 teachers across 57 schools. Their findings revealed a significant positive relationship between leadership and teachers' communication satisfaction. Specifically, core transformational leadership behavior, intellectual stimulation, and contingent reward behavior emerged as the leadership dimensions with the strongest influence on communication satisfaction.

2.2. Performance Management Systems

Performance management systems provide a structured framework for defining clear performance expectations, aligning individual and organizational goals, and enhancing employee motivation through role clarity and feedback mechanisms (DeNisi and Murphy, 2017). Employees will have more motivation to work toward the success of the organization if the performance management systems are functioning properly additionally, performance management systems allow for regular communication between management and their team members, and support both management (the communication provider) and their team(s) to provide comments on performance to establish where resiliency exists and where there is opportunity for improvement; both contribute to building a culture of ongoing learning and development. It creates opportunities for coaching, guidance, and skill-building, significantly improving employees' abilities and effectiveness in their roles. Notably, one of the important elements in attaining organizational goals is the real human capital of the company, also known as the "workforce." Even with different frameworks in place, there is an increasing demand to manage performance, align every organization member, and narrow the important divide between expected outcomes and actual results. An effectively structured performance management system ensures that every aspect of the organization collaborates closely toward maximizing productivity (Grossi et al., 2020).

2.3. Leadership Support and Employee Engagement

Leadership support is critical during organizational change initiatives. Leaders who actively communicate, provide guidance, and demonstrate support throughout transition periods help employees cope with uncertainty, reduce anxiety, and strengthen commitment to change. Such support fosters trust and confidence,

enabling organizations to navigate challenges more effectively and achieve successful change outcomes (Ford et al., 2021). Supportive leadership plays a vital role in fostering innovation and adaptability within organizations. Leaders who empower and encourage their employees create an environment where individuals feel confident to take calculated risks, generate creative ideas, and pursue innovative solutions. Such leadership practices contribute to the development of an innovation-oriented culture characterized by continuous learning, improvement, and adaptability. This culture is particularly important in today's dynamic and rapidly changing business environment, where organizations must remain flexible and responsive to emerging challenges and opportunities (Srimulyani et al., 2025). A study conducted by Cenkci and Özçelik (2015) investigated the relationship between leadership support and the level of engagement among employees in Turkish public sector organizations. Also, the study examined whether the leader's gender serves as a moderator of the relevant relationship. Data collected from 350 white-collar employees in Turkey demonstrated a positive association between leadership support and the facets of work engagement related to dedication and enthusiasm. Also, it was observed that leadership support indicated a positive association with work engagement.

2.4. Leadership Support and Working Environment

Widodo (2014) investigated how leadership and job satisfaction impact job environment and performance. The research was conducted at the Coca-Cola Company Indonesia, involving all employees in the manufacturing, distributing, and marketing beverage products. Data gathered through interviews and the distribution of questionnaires revealed a significant and positive impact of leadership and job satisfaction on job environment and performance. Further, an important finding was the mediating role of job satisfaction in the relationship between leadership and employee performance. Similarly, Nugroho et al. (2020) examined the structural relationships between transformational leadership, the organizational work environment, and employee performance within an Indonesian manufacturing context. Surveying a target population of 851 employees, which yielded 627 valid responses, their structural equation model demonstrated that leadership behaviors significantly and positively affect both the work environment and ultimate job performance. Crucially, their findings revealed that these paths are both direct and indirectly sustained through the parallel mediating roles of employee motivation and localized workplace conditions.

2.5. Leadership Support and the Performance Management System

Effective leadership and performance management are mutually supportive. Leaders establish the framework for performance management by establishing clear performance expectations, conveying these standards to their teams, and providing the necessary support and resources needed to complete these goals (Bao and Zhao, 2018). Paul and Berry (2013) conducted a study focused on investigating the role of leadership in promoting a unified organizational culture following mergers, highlighting effective performance management. Conducted at three South African higher education institutions, Nelson Mandela Metropolitan University, Cape Peninsula University of Technology, and Durban University of Technology, the study used a quantitative approach involving respondents from leadership roles, HR practitioners, and non-HR/non-management staff. Key results emphasized the central role of leadership, which received the highest average scores across all institutions and functional categories surveyed.

2.6. Leadership Communication and Employee Engagement

Leadership communication is widely recognized as a key factor influencing employee engagement and the working environment across various industries. Empirical studies have shown that leadership communication behaviors are strongly associated with employee engagement and communication satisfaction (Terek et al., 2015). In the hospitality sector, Arshad et al. (2022) found that leaders' communication competence positively influences employees' work engagement and commitment in hotel organizations in Bangladesh. The study further highlights that two-way communication plays a mediating role in strengthening the relationship between leadership communication and employee engagement.

2.7. Leadership Communication and Working Environment

Another study by Men (2014) examined the impact of organizational leadership on facilitating effective internal communication. The results emphasized that leadership positively influences the organization's balanced communication system, leading to strong relationships between employees and the organization. Notably, the impact of leadership on employee relational outcomes was also mediated through balanced internal communication. Balanced communication significantly contributed to the quality of employee-organization relationships, thus leading to employee engagement. Employee-organization relationships further mediated the influence of balanced internal communication on employee engagement. Also, advancement in technology has rendered a contextual work environment in which information and communication technology is used in UAE ministries's. In this regard, leaders are empowered to avail personalized resources to communicate with the employees further affecting engagement.

2.8. The Mediation of Performance Management Systems on the Relationship between Leadership Support, Employee Engagement, and Working Environment

Beyond direct leadership behaviors, a robust performance management system (PMS) is instrumental in cultivating a supportive work environment, driving employee engagement, and enhancing job satisfaction (Albrecht et al., 2015). When structured around objectivity and procedural fairness, a PMS provides employees with a heightened sense of strategic focus, explicit goal clarity, and actionable feedback core psychological resources that directly elevate workplace dedication. Rather than functioning merely as an evaluative tool, these systems serve as a critical administrative bridge that aligns individual task performance with macro-level organizational objectives. This alignment ensures that public servants maintain a transparent understanding of how their

distinct roles contribute to the broader institutional vision, thereby transforming routine performance tracking into an enabling and engaging workplace climate (Albrecht et al., 2015).

2.9. The Effect of Performance Management Systems on the Relationship between Communication Styles of Leadership, Engagement of Employees, and Work Environment

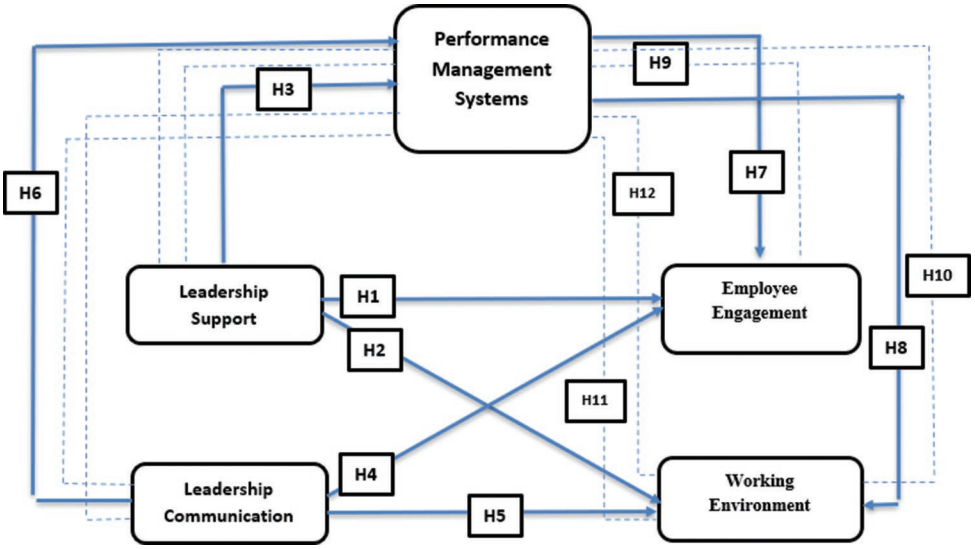
Cenkci and Özçelik (2015) contends that performance management systems (PMS) are essential to the ongoing success of organizations. PMS represents a structured approach to aiding organizations in creating clear expectation levels and measuring employees' and teams' performance; providing constructive feedback; and recognizing and rewarding employees' contributions. They also clarify employees' roles, align their efforts with organizational objectives, and develop employees' ongoing skills and capabilities. Leadership supports good communication as the basis for effective work environments. According to Nguyen et al. (2022), leaders can foster trust through open, honest and empathetic communication. The result is that people will be more engaged and feel they belong in the group. When employees receive clear communication regarding objectives, expectations and feedback, this builds a sense of value and motivation, which ultimately results in higher levels of productivity (and greater organizational culture). When performance management systems and leadership communication work together, organizations are better prepared to drive performance.

Cenkci and Özçelik (2015) argue that modern performance management systems (PMS) are fundamental to the long-term strategic success of contemporary organizations. A well-constructed PMS represents a systematic approach that enables entities to establish transparent expectation thresholds, objectively evaluate individual and team performance, deliver constructive feedback, and systematically recognize employee contributions. By doing so, these systems clarify task roles, align frontline efforts with macro-level organizational objectives, and facilitate continuous skill development.

Furthermore, supportive leadership leverages transparent communication as the bedrock of an effective working environment. According to Lubis (2024), leaders foster organizational trust and a profound sense of workplace belonging through open, honest, and empathetic communication channels. When public sector employees receive clear direction regarding performance milestones, strategic objectives, and iterative feedback, it builds a heightened sense of professional value and intrinsic motivation (Mayfield and Mayfield, 2017). Ultimately, this communicative clarity drives individual productivity while simultaneously reinforcing a resilient organizational culture. When formal performance systems and empathetic leadership communication function synergistically, organizations are structurally optimized to maximize human capital performance.

As illustrated in Figure 1, the proposed structural model delineates the complex direct and indirect pathways through which leadership behaviors shape workplace outcomes, a mechanism that can be comprehensively interpreted by integrating social exchange theory and open systems communication theory. Grounded in social exchange theory, the direct paths from leadership support to employee engagement and the working environment operate on the principle of reciprocity, where employees view managerial support as a discretionary socio-emotional investment from the organization and subsequently feel psychologically obligated to return this resource through heightened vigor, dedication, and a more positive workplace climate. Concurrently, through the lens of open systems communication theory, leadership communication functions as a vital informational input that penetrates hierarchical boundaries to reduce role ambiguity and stabilize the internal ecosystem, directly fostering a transparent working environment where open dialogue empowers public servants to fully invest their cognitive and behavioral energies into active engagement. Crucially, Figure 1 demonstrates that these interpersonal leadership dynamics do not operate in an administrative vacuum; rather, performance management systems (PMS) act as the pivotal structural throughput that operationalizes and institutionalizes these exchanges within formal public ministries. Within this integrated framework, a procedurally

Figure 1: Conceptual framework of current research study



fair performance management system translates raw leadership support into objective goals, rewards, and career clarity while systemizing fluid communication into reliable feedback loops and appraisal dialogues, thereby acting as the critical mediating mechanism that systematically converts leadership inputs into a stable, supportive working environment that ultimately maximizes and sustains employee engagement.

3. METHODOLOGY

3.1. Research Design and Context

This study employs a quantitative research design to investigate the impact of leadership support and communication on employee engagement and the work environment within the Ministry of Education (MoE) in the United Arab Emirates (UAE). A cross-sectional survey methodology was utilized to examine these relationships, with a specific focus on the mediating role of performance management systems (PMS).

3.2. Sampling and Data Collection

The target population comprised administrative personnel at the UAE ministry of education. A structured questionnaire was distributed to a sample of 370 individuals, resulting in 319 valid responses (86% response rate). The final sample was predominantly male (68%) and Emirati nationals (85.9%), with a high level of educational attainment (61.1% holding Master's or PhD degrees).

3.3. Instrumentation and Measurement

The research instrument was developed using established scales to ensure content validity.

- Leadership support: Measured through dimensions of emotional support, guidance, empowerment, and role modeling ($\alpha = 0.84$)
- Leadership communication: Evaluated through two-way communication, frequency/accessibility, and role clarity ($\alpha = 0.97$)
- Performance management systems: Assessed via feedback and continuous improvement mechanisms ($\alpha = 0.64$)
- Employee engagement: Captured through emotional and cognitive engagement facets ($\alpha = 0.97$)
- Work environment: Operationalized through job resources and workplace incentives ($\alpha = 0.94$).

All items were measured on a 5-point Likert scale, where 1 indicated "Strongly Disagree," and 5 indicated "Strongly Agree."

3.4. Data Analysis Strategy

Data analysis was performed using partial least squares-structural equation modeling (PLS-SEM). This method was selected for its robustness in handling complex models with mediation and its effectiveness in exploratory research within the administrative sciences. The analysis proceeded in two stages:

1. Measurement model assessment: Reliability and validity were evaluated using Cronbach's Alpha, composite reliability (CR), and average variance extracted (AVE). Discriminant validity was confirmed using the Fornell-Larcker criterion and the Heterotrait-Monotrait Ratio (HTMT)
2. Structural model assessment: The hypotheses were tested by examining path coefficients, R^2 (explanatory power), and Q^2 (predictive relevance).

4. RESULTS

4.1. Demographic Variables

The study sample comprised 319 participants, with a notable gender imbalance: 68.0% were male (n = 217) and 32.0% were female (n = 102). Most participants (85.9%, or 274 of respondents) are Emirati nationals. The remainder are expatriates (14.1%, or 45 of respondents). Most participants have a high level of education. The participants also had the following distribution of degrees: 124 (38.9%) Bachelor's, 103 (32.3%) Master's, and 92 (28.8%) PhD. Thus, the majority of the participants are highly educated. Occupationally, most respondents worked in the public sector (because 80.9% of those surveyed were employed by the government), while 19.1% were in director positions. In terms of professional experience, 76.5% of the survey participants reported having 1-5 years in their current field, 12.9% having 6-10 years, and 10.7% having worked more than 11 years in their profession. This shows that the overwhelming majority of the sample is composed of college-educated, Emirati, males who have <5 years of experience working in the public sector. More details can be found in Table 1.

4.2. Reliability of the Instrument

The researcher evaluated the internal consistency of each of the scales included in the study through the use of Cronbach's Alpha Co-efficient. The internal consistency of an instrument provides a measure of the degree to which the items in each construct measure the same thing (Taber, 2018). The majority of the main scales in this research were high reliability with Cronbach's Alpha Co-efficients exceeding the minimum acceptable standard of 0.60. The leadership communication, employee engagement, and working environment constructs had the greatest internal consistencies with Alpha Co-efficients of 0.97, 0.97, and 0.94, respectively. The high correlations among elements of a construct, along with the overall high reliability (leadership support has an α of 0.84), suggest that the elements are strongly related and that the construct accurately measures the underlying concepts. There was some variability in the reliability of the subcomponents of leadership support, but it was acceptable overall. The overall reliability of the performance management systems scale (Cronbach's Alpha = 0.64) is also considered acceptable. There were significant variations in reliability; however, within the employee engagement construct, the overall reliability was very high ($\alpha = 0.97$) and each of the two subcomponents had acceptable reliability (Emotional Engagement, $\alpha = 0.75$; cognitive engagement, $\alpha = 0.68$). the working environment scale, overall highly reliable, included subcomponents with strong internal consistency, such as job resources ($\alpha = 0.79$) and workplace incentives ($\alpha = 0.74$). Overall, the findings suggest that most scales are reliable, particularly the main constructs as illustrated in Table 2.

4.3. Assessment of Multivariate Outliers

To identify multivariate outliers, a residual diagnostic assessment was conducted on the dataset (n = 319), as summarized in Table 3. Standardized and studentized residuals fell strictly within acceptable limits (ranging from −1.807 to 1.829), confirming

the absence of extreme univariate deviations. To evaluate true multivariate influence, Mahalanobis distance and Cook's distance were examined concurrently. The maximum Mahalanobis distance was 18.535, which sits safely within standard Chi-square critical limits for the model's parameters, while the maximum cook's distance was exceptionally low at 0.046, far below the traditional threshold of 1.0. Combined with a low maximum centered leverage value (0.058), these diagnostics prove that no single observation exerts undue influence on the regression weights, justifying the retention of all 319 cases for structural equation modeling.

Table 1: Demographic variables (n=319)

Personal information	Frequency	Percent
Gender		
Male	217	68.0
Female	102	32.0
Region		
Emirati	274	85.9
expatriate	45	14.1
Education level		
Bachelor	124	38.9
Masters	103	32.3
PhD	92	28.8
Occupation		
Director	61	19.1
Employee (Public Sector)	258	80.9
Years of experience		
1-5 years	244	76.5
6-10 years	41	12.9
11+ years	34	10.7

Table 2: Cronbach's Alpha for the reliability of the study scales

Scale	Cronbach's Alpha
Leadership support	0.84
Emotional support	0.71
Guidance	0.61
Empowerment and role modelling	0.70
Clarity of communication	0.83
Leadership communication	0.97
Two-way communication	0.74
Frequency and accessibility	0.81
Role clarity and alignment	0.65
Performance management systems	0.64
Employee engagement	0.97
Emotional engagement	0.75
Cognitive engagement	0.68
Working environment	0.94
Job resources	0.79
Workplace Incentives	0.74

As summarized in Table 4, the inner VIF values across all regression blocks range from 1.565 to 3.725. For the primary endogenous model predicting employee engagement, the highest VIF is observed for leadership support (3.725), followed by working environment (3.529), leadership communication (2.419), and performance management systems (1.620). While the slightly elevated values for leadership support and working environment reflect a moderate level of shared conceptual variance, all indices remain comfortably beneath the conservative threshold of 5.0. Similarly, within the Working Environment block, VIF values are completely acceptable, spanning from 2.097 (Leadership Communication) to 2.643 (leadership support). These diagnostics confirm a healthy level of structural independence among the explanatory constructs, guaranteeing that the subsequent path coefficients can be interpreted reliably without multicollinearity inflation.

In addition to variance inflation factors, multicollinearity was assessed by evaluating the bivariate correlation matrix across the latent constructs. According to Tabachnick et al. (2007), a Pearson correlation coefficient (r) exceeding the critical threshold of 0.90 indicates severe multicollinearity, which can destabilize the estimation of standard errors in structural models. As displayed in Table 5, all bivariate correlation coefficients fall comfortably below this formal 0.90 threshold, confirming that no problematic collinearity issues exist. The highest correlation is observed between Leadership Support and Working Environment ($r = 0.845$), followed closely by the relationship between leadership support and leadership communication ($r = 0.748$). While these values indicate strong, shared variance typical of highly integrated organizational leadership frameworks they remain within acceptable psychometric boundaries. Furthermore, a robust and expected correlation is noted between performance management systems and employee engagement ($r = 0.733$). Because none of the inter-construct correlation coefficients exceed the critical parameter, the data exhibits a satisfactory level of discriminant independence, supporting the validity of further multivariate structural analysis.

4.4. Descriptive Analysis of Variables

Table 6 shows the descriptive statistics for each of the three variables studied. Each of the three constructs' means and standard deviations is

Table 3: Examining the existence of significant outliers

Residual Statistics	Minimum	Maximum	Mean	Standard deviation	n
Predicted value	125.92	196.99	160.00	11.147	319
Standard predicted value	−3.057	3.318	0.000	1.000	319
Standard error of predicted value	5.253	22.762	8.524	2.587	319
Adjusted predicted value	130.00	202.80	160.14	11.058	319
Residual	−164.887	166.860	0.000	91.555	319
Standard residual	−1.795	1.817	0.000	0.997	319
Studentized residual	−1.800	1.822	−0.001	1.002	319
Deleted residual	−166.461	167.812	−0.136	92.480	319
Studentized deleted residual	−1.807	1.829	−0.001	1.003	319
Mahalanobis distance	0.044	18.535	1.994	2.219	319
Cook's distance	0.000	0.046	0.003	0.005	319
Centered leverage value	0.000	0.058	0.006	0.007	319

provided for the varying degrees of descriptive evaluation of second-order constructs with respect to first-order constructs. Overall, the results indicate near complete agreement among respondents with reported mean scores across all dimensions studied averaging above four point four (4.4) on the measurement scale (indicating positive perceptions) that contributed towards their overall rating across all dimensions. Leadership support, as indicated by emotional support (M = 4.569, SD = 0.223), demonstrates the participants' perceptions of leaders' supportive behaviours as consistently evident; whereas leadership communication, as represented by two-way communication (M = 4.486, SD = 0.300), demonstrates effective two-way communication by leaders with their employees. The performance management system, especially in the area of feedback and continuous improvement (M = 4.538, SD = 0.313), has generally received positive ratings, indicating that employees believe they receive feedback often enough and are supported with opportunities to improve performance. Employees were also rated highly on emotional engagement (M = 4.575, SD = 0.269), suggesting they tend to have strong feelings of connection to their job. Employees perceived their working environment (via Job Resources) as satisfactory (M = 4.575, SD = 0.255), indicating that they have ample resources and support available to them in their working environment.

Table 4: Multicollinearity test (inner VIF values)

Model	VIF
Employee engagement	
Leadership support	3.725
Leadership communication	2.419
Performance management systems	1.620
Working environment	3.529
Working environment	
Employee engagement	2.481
Leadership support	2.643
Leadership communication	2.097
Performance management systems	2.570
Performance management systems	
Employee engagement	1.565
Working environment	3.531
Leadership support	3.685
Leadership communication	2.417
Leadership communication	
Performance management systems	2.568
Employee engagement	2.484
Working environment	3.061
Leadership support	3.542
Leadership support	
Leadership communication	2.258
Performance management systems	2.496
Employee engagement	2.438
Working environment	2.460

Table 5: Test of multicollinearity based on correlation between factors

Variables	1	2	3	4	5
Leadership support	1.000				
Leadership communication	0.748	1.000			
Performance management systems	0.452	0.444	1.000		
Employee engagement	0.467	0.433	0.733	1.000	
Working environment	0.845	0.721	0.488	0.453	1.000

4.5. Convergent Validity

Convergent validity is defined as the extent to which a set of observations, norms, or indicators correlates with what they claim to measure (Hair et al., 2010). It is confirmed when items have a higher proportion of shared variance with the construct determined by factor loadings and average variance extracted (AVE). Also, the outer Loadings for items of each construct need to reach an acceptable threshold (0.70) to be considered convergent in multivariate analysis (Hair Jr et al., 2017), that is, the indicator explains more variance in the construct than error variance. Table 7 and Figure 2 show that most indicators surpassed the 0.70 threshold, indicating good convergence. Four items (RCA4, JR4, EE5, and FA1) had loadings under 0.40 and were excluded from the analysis, in line with Hair Jr et al. (2014) guidance to remove indicators with very low loadings when doing so enhances composite reliability (CR) or AVE.

As shown in Table 8, the value of the diagonal (square roots of AVE) for all constructs was higher than the inter-construct correlation. This pattern indicates that the measures used in our measurement model are distinct and capable of satisfying discriminant validity under Fornell-Larcker criterion.

As the third method of measuring the discriminant validity, the Heterotrait-Monotrait ratio (HTMT) was used in this study to examine discriminant validity, and it measures the average of heterotrait–heteromethod correlations to that of monotrait–heteromethod correlations (Ringle et al., 2020). Henseler et al. (2016) suggest that HTMT values should be <0.90 to avoid

Table 6: Descriptive statistics for the studied variables

First-order construct	Second-order construct	No. of indicators	Mean	Standard deviation
Leadership support	Emotional support (ES)	5 indicators	4.569	0.223
	Guidance (G)	4 indicators		
	Empowerment and role modelling (ERM)	4 indicators		
	Clarity of communication (CC)	4 indicators		
Leadership communication	Two-way communication (TWC)	4 indicators	4.486	0.300
	Frequency and accessibility (FA)	4 indicators		
	Role clarity and alignment (RCA)	4 indicators		
Performance management systems	Feedback and continuous improvement (FCI)	4 indicators	4.538	0.313
Employee engagement	Emotional engagement (EE)	5 indicators	4.575	0.269
	Cognitive engagement (CE)	4 indicators		
Working environment	Job resources (JR)	5 indicators	4.575	0.255
	Workplace incentives (WI)	4 indicators		

Table 7: Factor loading of items

Constructs	Indicators	Loading (>0.7)
Clarity of communication (CC)	CC1	0.948
	CC2	0.974
	CC3	0.889
	CC4	0.962
Emotional support (ES)	ES1	0.831
	ES2	0.847
	ES3	0.828
	ES4	0.531
Guidance (G)	G1	0.883
	G2	0.874
	G3	0.857
	G4	0.873
Empowerment and role modelling (ERM)	ERM1	0.922
	ERM2	0.961
	ERM3	0.901
	ERM4	0.951
Two-way communication (TWC)	TWC1	0.966
	TWC2	0.968
	TWC3	0.970
	TWC4	0.953
Frequency and accessibility (FA)	FA1	Deleted
	FA2	0.976
	FA3	0.877
	FA4	0.604
Role clarity and alignment (RCA)	RCA1	0.907
	RCA2	0.902
	RCA3	0.915
	RCA4	Deleted
Emotional engagement (EE)	EE1	0.927
	EE2	0.788
	EE3	0.841
	EE4	0.939
	EE5	Deleted
Cognitive engagement (CE)	CE1	0.906
	CE2	0.803
	CE3	0.920
	CE4	0.831
Job resources (JR)	JR1	0.869
	JR2	0.876
	JR3	0.903
	JR4	Deleted
	JR5	0.740
Workplace incentives (WI)	WI1	0.750
	WI2	0.889
	WI3	0.920
	WI4	0.869
Performance management systems	FCI1	0.924
	FCI2	0.876
	FCI3	0.851
	FCI4	0.901

*All factor loadings were statistically significant, except for RCA4, JR4, EE5, and FA1, which were excluded from the scale due to their loadings falling below 0.40

potential discriminant validity problems. Table 9 demonstrates that HTMT values are within the acceptable threshold of <0.90 (Henseler et al., 2015), indicating empirical discriminant validity, as all convergent validity values were greater than the square root of AVE. The results support discriminant validity based on the recommended HTMT measure.

4.6. Structural Assessment of Model

It is essential that one evaluates the structural model to understand the validity of the model and test hypotheses, especially path coefficients (Hair et al., 2014). Structure model includes testing the levels of key metrics like path coefficients, r-squared (R2), effect size: f2 and predictive relevance; Q2.

4.6.1. Direct relationships (hypotheses)

The path coefficients of the structural model were estimated, and subsequently, bootstrapping was used to assess their statistical significance. These coefficients describe the direction and strength of the relationship between constructs. When the coefficient is closer to +1 that means a closer and more positive association (Hair Jr et al., 2014). Direct path estimates for this study are shown in Figure 3 and described in Table 10.

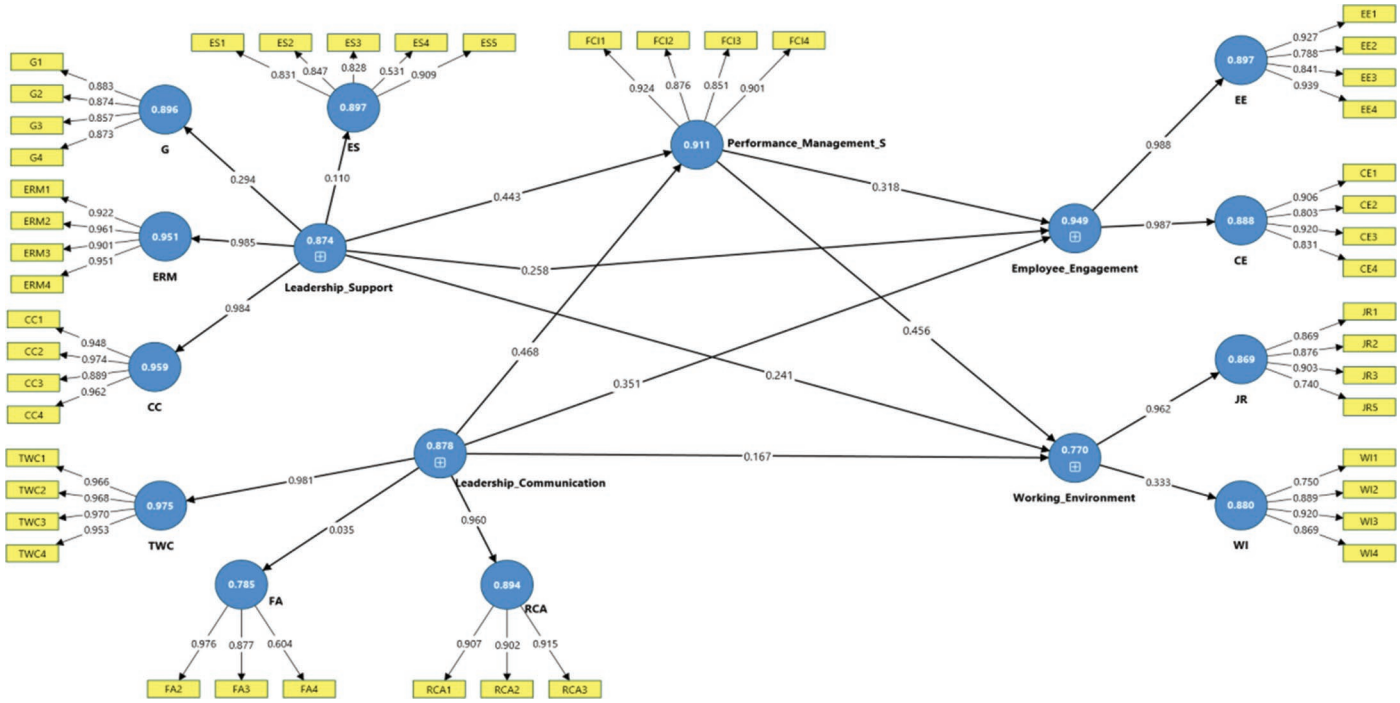
The outcome demonstrates that all the hypothesized direct effects (H_1-H_8) are statistically significant ($P < 0.05$). Specifically, leadership communication significantly influences employee engagement ($\beta = 0.351$, $t = 5.839$, $P < 0.001$), performance management systems ($\beta = 0.468$, $t = 7.575$, $P < 0.001$), and working environment ($\beta = 0.167$, $t = 2.561$, $P = 0.010$). Similarly, leadership support has significant positive effects on employee engagement ($\beta = 0.258$, $t = 4.060$, $P < 0.001$), performance management systems ($\beta = 0.443$, $t = 6.856$, $P < 0.001$), and Working Environment ($\beta = 0.241$, $t = 2.399$, $P = 0.016$). Furthermore, performance management systems significantly affect both employee engagement ($\beta = 0.318$, $t = 4.784$, $P < 0.001$) and working environment ($\beta = 0.456$, $t = 4.543$, $P < 0.001$). Therefore, performance management systems is influenced more by leadership communication and leadership support (in a direct fashion) while working environment is influenced more by performance management systems than employee engagement. Taken together, the results thus confirmed each of the eight theoretically hypothesized direct effects included in our model.

4.6.2. Explanatory power of the model (R^2)

The R^2 measures the variance in each of your dependent constructs that can be accounted for by its related independent variables. In PLS-SEM, larger R^2 values mean that the model has better explanatory power (Hair Jr et al., 2014). As shown in Table 11, the R^2 values of the constructs employee engagement and performance management system are meaningful based on Cohen (1988) as well as Chin's (1998) classification, but only slightly with regard to Chin's classification. The Working Environment construct also presents a common R^2 magnitude according to Cohen, but it is not in Chin's thresholds in this table.

An R^2 >0.26 can thus be labelled as a substantial amount of variance explained, and thus strong predictive accuracy (Cohen, 1988). In the meantime, Chin (1998) defined R^2 values of 0.67, 0.33, and.19 as strong, moderate and low for endogenous latent variables, respectively. In the model, all constructs demonstrated satisfactory levels, indicating that the model provides a highly explanatory framework for these constructs, with employee engagement and performance management system exhibiting the most robust fit. This evidence supports the goodness-of-fit of the model by explaining relationships among variables unnecessarily, thereby confirming its validity in evaluating the actual underlying structural framework.

Figure 2: Measurement model



Key: Clarity of communication (CC); Emotional support (ES); Guidance (G); Empowerment and role modelling (ERM); Two-Way Communication (TWC); Frequency and Accessibility (FA); Role Clarity and Alignment (RCA); Emotional Engagement (EE); Cognitive Engagement (CE); Job Resources (JR); Workplace Incentives (WI); Performance Management Systems (FCI)

Table 8: Discriminant validity by Fornell-Larcker criterion

Variables	CC	CE	EE	ERM	ES	FA	G	JR	FCI	RCA	TWC	WI
CC	**0.944**											
CE	0.754	**0.867**										
EE	0.762	0.750	**0.876**									
ERM	0.869	0.752	0.754	**0.934**								
ES	0.077	0.090	0.039	0.069	**0.800**							
FA	0.015	0.023	0.015	0.005	0.161	**0.834**						
G	0.173	0.117	0.141	0.177	0.030	−0.102	**0.872**					
JR	0.696	0.711	0.752	0.726	0.077	0.030	0.111	**0.849**				
FCI	0.778	0.791	0.787	0.775	0.174	0.038	0.172	0.802	**0.889**			
RCA	0.741	0.802	0.773	0.744	0.074	0.026	0.147	0.734	0.798	**0.908**		
TWC	0.691	0.748	0.733	0.687	0.026	0.020	0.126	0.685	0.750	0.888	**0.964**	
WI	0.075	0.031	0.066	0.083	0.000	0.050	0.766	0.063	0.060	0.064	0.052	**0.860**

Table 9: Discriminant validity by HTMT

Variables	CC	CE	EE	ERM	ES	FA	G	JR	FCI	RCA	TWC	WI
CC												
CE	0.819											
EE	0.824	0.810										
ERM	0.847	0.820	0.819									
ES	0.059	0.077	0.062	0.052								
FA	0.030	0.038	0.047	0.034	0.150							
G	0.180	0.126	0.152	0.184	0.039	0.115						
JR	0.757	0.804	0.849	0.793	0.078	0.088	0.122					
FCI	0.832	0.880	0.872	0.833	0.105	0.046	0.184	0.818				
RCA	0.802	0.702	0.867	0.808	0.079	0.030	0.158	0.825	0.884			
TWC	0.715	0.806	0.787	0.715	0.053	0.023	0.129	0.737	0.795	0.815		
WI	0.081	0.049	0.074	0.089	0.034	0.062	0.875	0.092	0.064	0.072	0.061	

4.6.3. Effect size (F^2)

Effect size (F^2) is the amount of influence one construct of an exogenous variable has on an endogenous construct, providing more information about the strength of all included constructs' relationships in the model (Hair Jr et al., 2017). F^2 values of 0.02, 0.15, and 0.35 are traditionally regarded as small,

Figure 3: Structure model

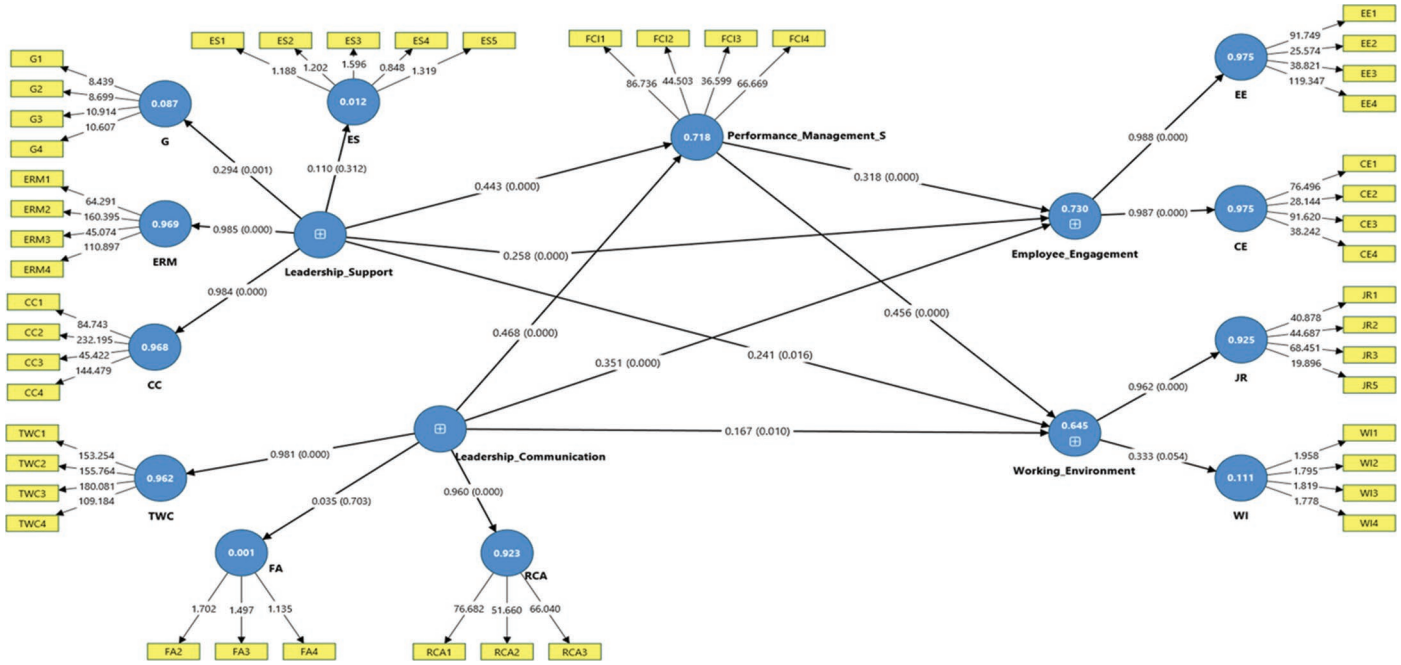


Table 10: Direct relationships

H	Relationship	Original sample (O)	Standard deviation	T statistics (|O/STDEV|)	P-value	Decision
H_1	Leadership Communication -> Employee Engagement	0.351	0.060	5.839	0.000	Supported
H_2	Leadership Communication -> FCI	0.468	0.062	7.575	0.000	Supported
H_3	Leadership Communication -> Working Environment	0.167	0.065	2.561	0.010	Supported
H_4	Leadership Support -> Employee Engagement	0.258	0.064	4.060	0.000	Supported
H_5	Leadership Support -> FCI	0.443	0.065	6.856	0.000	Supported
H_6	Leadership Support -> Working Environment	0.241	0.100	2.399	0.016	Supported
H_7	FCI-> Employee Engagement	0.318	0.067	4.784	0.000	Supported
H_8	FCI-> Working Environment	0.456	0.100	4.543	0.000	Supported

*FCI: Performance management systems

Table 11: R^2 results

Construct	R-square	Magnitude	
		Cohen (1988)	Chin (1998)
Employee engagement	Substantial	Substantial	Moderate
Performance management system	Substantial	Substantial	Moderate
Working environment	Substantial	substantial	moderate

moderate, and large effects. Table 12 shows that leadership communication has a medium effect on performance management system (F^2 = 0.359) and small effect on Employee Engagement (F^2 = 0.156), meanwhile negligible to working environment (F^2 = 0.027). Similarly, leadership support have moderate effect on performance management system (F^2 = 0.322) and small effects are also found on employee engagement (F^2 = 0.087) and working environment (F^2 = 0.057). The relationships with employee engagement (F^2 = 0.106) and working environment (F^2 = 0.165) are supported by the analysis, respectively. The model implies that both leadership communication and leadership support influence working environment through the performance management system, although the effect sizes on working environment itself are relatively less powerful.

Table 12: Effect size of individual relationships

Relationship	Value	Results
Leadership Communication → Employee Engagement	0.156	Small
Leadership Communication → Performance Management System	0.359	Medium
Leadership Communication → Working Environment	0.027	Negligible
Leadership Support → Employee Engagement	0.087	Small
Leadership Support → Performance Management System	0.322	Medium
Leadership Support → Working Environment	0.057	Small
Performance Management System → Employee Engagement	0.106	Small
Performance Management System → Working Environment	0.165	Medium

4.7. Prediction Relevance of the Model (Q^2)

The study utilized the predictive relevance statistic (Q^2) to assess the model's capability in forecasting outcomes (Chin, 2010). As shown in Table 13, the Q^2 predict values for employee engagement (0.697), performance management system (0.712), and working environment (0.570) were also >0, as shown in Table 10, thus implying that all the model constructs are relevant in predicting

Table 13: Prediction relevance of the model

Variable	Q^2 predict	RMSE	MAE	Result of predictive relevance
Employee engagement	0.697	0.554	0.407	Yes
Performance management system	0.712	0.540	0.387	Yes
Working environment	0.570	0.655	0.502	Yes

their respective endogenous latent variables (Hair Jr et al., 2021). Results for other constructs show relatively low RMSE and MAE, with the lowest values for the performance management system (RMSE = 0.540; MAE = 0.387), followed by employee engagement (RMSE = 0.554; MAE = 0.407), and then working environment (RMSE = 0.655; MAE = 0.502). The final column, result of predictive relevance, further indicates that constructs used in the model have predictive relevance and hence evaluate their predictive power on the other constructs (Hair Jr et al., 2017).

4.8. Importance-Performance Map Analysis (IPMA)

The IPMA extends the findings of the PLS path model by not only assessing the importance of constructs (via total effects) but also their performance (via rescaled index values from 0 to 100), allowing managers to prioritize interventions theoretically anchored in the functioning landscape (Hair Jr et al., 2017). This analysis should identify high-importance low-performance constructs, indicating that opportunities for improvement lie in these specific areas. Working environment: From the results in Figure 4 and the corresponding Table 14, it is clear that performance management system has the strongest importance (total effect = 0.456) and performance score (support rating = 71.770), closely followed by leadership support (importance = 0.442; performance = 71.703) and leadership communication (importance = 0.380; performance =66.127). While leadership communication ranks somewhat lower in performance than the other two constructs, its weakness is consistent with their established effects on working environment.

As illustrated in Figure 5 and Table 15, for employee engagement, leadership communication is the most significant construct (total effect = 0.500), with an effective score lower than HR efficiency (65.866) and internal branding (74.473). This suggests that enhancing leadership communication could significantly improve employee engagement quality. Leadership support (importance = 0.399; performance = 71.703) and Performance management system (importance = 0.318; performance = 71.770) also score significantly, though their higher ratings suggest somewhat less need for improvement on those fronts. In summary, while leadership communication appears to be a key area for improvement in employee engagement (given its high importance and relatively low performance), the performance management system continues to play a crucial role in the working environment. Systematically investing in these areas will help to realise the full potential of the organisation's development efforts.

4.9. Mediating Relationship Analysis

Mediation analysis is used when we want to test whether the effect of an independent variable (IV) on a dependent variable (DV) depends upon some intervening fourth variable, called a mediator variable, or simply mediator in this guide, following the convention of Hayes (2013). A mediator is, as defined by Baron and Kenny (1986), a mechanism that explains the relation between a predictor and an outcome. The primary purpose is to identify whether the mediator mediates or demonstrates a significant effect in transmitting the causal impact of the IV on DV (Ramayah et al., 2011); therefore, revealing the mechanisms that underline a particular relationship (Hair et al., 2017). As shown in Table 16, Leadership Communication significantly influenced Employee Engagement through Performance Management Systems (Path a = 0.468, Path b = 0.318, β = 0.149, SE = 0.046, t = 3.235, 95% CI [0.059, 0.239]) and working environment (Path a = 0.468, Path b = 0.456, β = 0.213, SE = 0.049, t = 4.355, 95% CI [0.117, 0.309]). Likewise, leadership support indirectly affected employee engagement (Path a = 0.443, Path b = 0.318, β = 0.141, SE = 0.057, t = 2.471, 95% CI [0.029, 0.253]) and working environment (Path a = 0.443, Path b = 0.456, β = 0.202, SE = 0.057, t = 3.544, 95% CI [0.090, 0.314]) via performance management systems. In all cases, the 95 % bootstrapped CIs did not contain zero, demonstrating that the mediation effects were significant. In addition, direct paths from leadership communication and leadership support to the DVs also remained significant after accounting for the mediator (Table 16), thus suggesting that mediation was partial. Together, these results lend strong support for Hypotheses H_9-H_{12}.

5. DISCUSSION

This study examined the relationships between leadership support (LS), leadership communication (LC), employee engagement (EE), and the working environment (WE) within the UAE Ministry of Education's administrative (non-teaching) staff. The study was grounded in social exchange theory (SET), which posits that employees reciprocate perceived organizational support with positive attitudes and behaviors, including higher engagement and performance (Blau, 2017; Cropanzano and Mitchell, 2005). In addition, leadership support theory and communication-based leadership perspectives were used to explain how supportive and well-communicated leadership practices, when embedded within performance management systems (PMS), shape employee attitudes and workplace conditions.

The findings are consistent with established empirical research demonstrating that leadership behavior is a key antecedent of employee engagement. Meta-analytic evidence confirms that transformational and supportive leadership styles are positively associated with employee engagement through mechanisms such as trust, meaning-making, and psychological empowerment (Breevaart et al., 2015; Christian et al., 2011). Similarly, leadership communication has been identified as a critical driver of role clarity, fairness perceptions, and employee motivation, particularly when communication is frequent, transparent, and feedback-oriented.

Large-scale global evidence further reinforces the importance of managerial behavior in shaping engagement. Gallup's global workplace research consistently shows that managers account for a substantial proportion of variance in employee engagement, particularly through ongoing feedback, recognition,

Figure 4: IPMA (priority map) for working environment

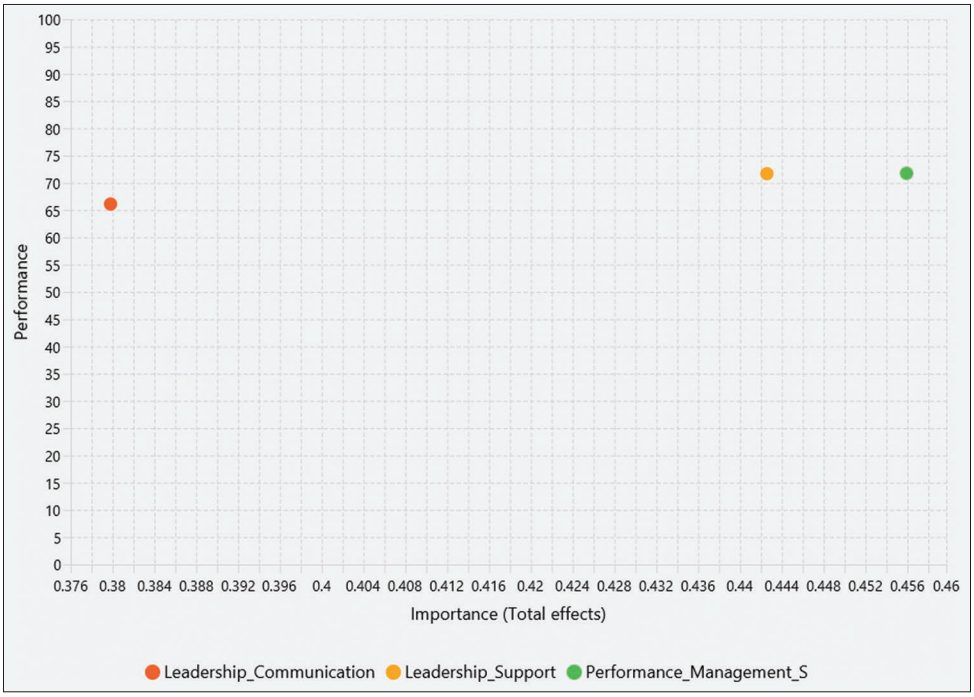


Figure 5: IPMA (priority map) for employee engagement

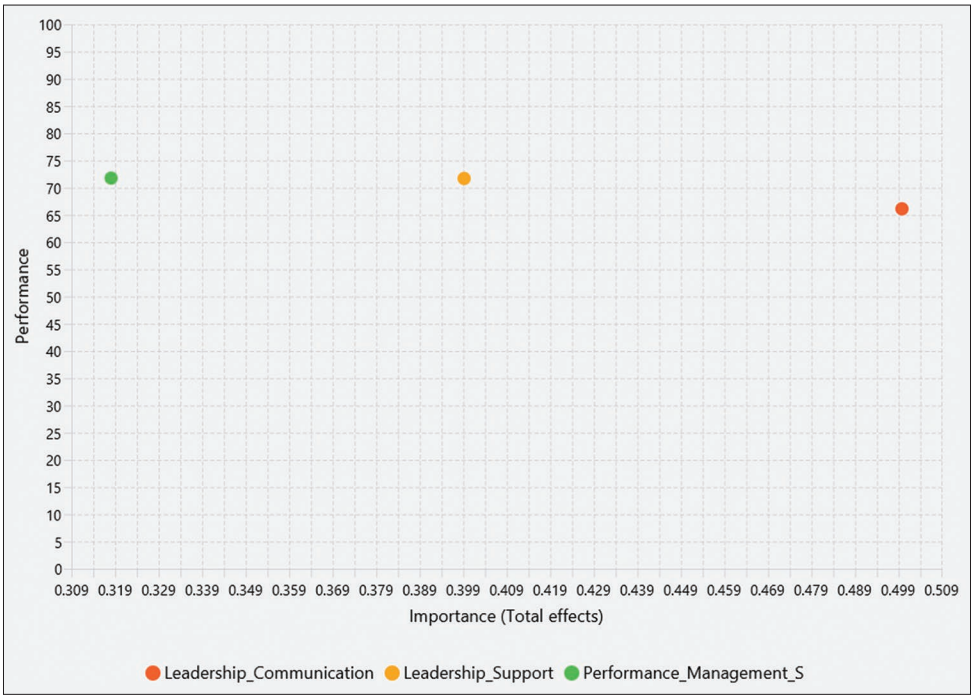


Table 14: IPMA for working environment

Latent constructs	Construct total effect (Importance)	Index values (performance)
Leadership communication	0.380	66.127
Leadership support	0.442	71.703
Performance management system	0.456	71.770

Table 15: IPMA for employee engagement

Latent constructs	Construct total effect (importance)	Index values (performance)
Leadership communication	0.500	66.127
Leadership support	0.399	71.703
Performance management system	0.318	71.770

Table 16: Mediating effect of performance management system

H	Relationships	Original sample=standard beta		Indirect effect	(SD for the indirect effect)	t-value	Bootstrapped confidence interval	
		IV -> MV	MV -> DV					
		Path a	Path b		SE		95% LL	95% UL
H_9	Leadership Communication -> FCI -> Employee_Engagement	0.468	0.318	0.149	0.046	3.235	0.059	0.239
H_{10}	Leadership Communication -> FCI -> Working Environment	0.468	0.456	0.213	0.049	4.355	0.117	0.309
H_{11}	Leadership Support -> FCI -> Employee Engagement	0.443	0.318	0.141	0.057	2.471	0.029	0.253
H_{12}	Leadership Support -> FCI -> Working Environment	0.443	0.456	0.202	0.057	3.544	0.090	0.314

*FCI: Performance management systems

and developmental support (Gallup, 2024). This highlights the importance of structured systems such as PMS to institutionalize leadership communication and ensure consistency in performance dialogue and employee development practices.

Recent HRM and organizational behavior literature emphasizes that performance management systems function as an integrating mechanism between leadership behavior and employee outcomes. Effective PMS enhance engagement by providing goal clarity, continuous feedback, and perceived procedural fairness (Aguinis and Glavas, 2019; DeNisi and Murphy, 2017). Moreover, performance management systems are increasingly conceptualized as dynamic communication systems rather than static appraisal tools, where ongoing dialogue between managers and employees strengthens engagement and learning cultures (Levy et al., 2015).

In public sector organizations, leadership effects are often mediated or amplified by formal administrative systems due to hierarchical structures and procedural governance. Research indicates that perceived fairness in such contexts is strongly influenced by structured HR practices rather than informal leader-follower interactions alone (Rainey, 2009). Therefore, PMS plays a critical role in translating leadership intent into consistent and transparent employee experiences, thereby reducing perceptions of bias and improving organizational trust.

Furthermore, cultural context provides an additional explanatory layer for the UAE setting. In collectivist and high power-distance cultures, employees tend to place greater emphasis on formal organizational systems when interpreting leadership behavior and fairness (Hofstede, 2001). As a result, PMS becomes not only a managerial tool but also a cultural mechanism through which leadership communication and support are legitimized and operationalized within bureaucratic public sector environments.

Therefore, this study contributes to the literature by demonstrating that PMS acts as a structural bridge between leadership behavior (support and communication) and employee engagement outcomes. It extends existing leadership and engagement models by integrating systems-level mechanisms, particularly within a Gulf public-sector context where empirical evidence remains limited. The findings highlight that leadership effectiveness is maximized when embedded within structured performance management systems that ensure consistency, transparency, and developmental feedback.

6. CONCLUSION

This study demonstrates that the combined influence of leadership support and leadership communication is most effective when embedded within formal performance management systems. The findings indicate that the direct effects of leadership support on employee engagement and the working environment are relatively limited compared to the stronger indirect effects achieved when leadership communication is operationalized through structured performance management processes. This suggests that formal systems play a critical role in translating leadership behaviors into meaningful employee outcomes.

Thus, performance management systems serve as an essential mechanism that connects leadership practices with employee engagement by providing structure, consistency, and clarity in organizational processes. Elements such as goal setting, continuous feedback, and performance review cycles enhance role clarity and strengthen employees' perceptions of fairness and organizational support. As a result, employees are more likely to demonstrate higher levels of engagement and experience a more supportive working environment.

From a practical perspective, the findings highlight the importance of strengthening the integration between leadership communication and performance management practices. Organizations, particularly in public sector settings, should ensure that communication is not only consistent and transparent but also systematically embedded within performance management routines. This alignment enables leaders to reinforce expectations, support employee development, and sustain engagement more effectively.

Future improvements in organizational practice should focus on enhancing the quality and consistency of performance management processes, ensuring that they function not only as evaluative tools but also as developmental and communication-driven systems. In doing so, organizations can create more engaging work environments, improve employee motivation, and strengthen overall organizational effectiveness.

Finally, future research should explore more advanced and technology-enabled approaches to performance management, as well as adopt broader methodological designs and cross-sector comparisons to deepen understanding of how leadership and performance systems interact across different organizational and cultural contexts.

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