

Does Institutional Type Matter? Leadership, Trust, and Faculty Performance in Public and Private Zambian Universities

**Lydia Mhango¹, Chanda Sichinsambwe², Evaristo Nsenduluka³,
Matthew K. Banda⁴**

¹Student, ^{2,3}Professor, ⁴Doctor

¹School of Graduate Studies, Copperbelt University, Kitwe-Zambia

²Production Management, Copperbelt University, Kitwe-Zambia

³Management, Copperbelt University, Kitwe-Zambia

⁴Human Resource Management, Copperbelt University, Kitwe-Zambia

Abstract

This study explores the structural and relational mechanisms linking leadership, trust, and employee performance within public and private higher education institutions (HEIs) in Zambia. Drawing on Social Exchange Theory and the Leader-Member Exchange (LMX) framework, data was gathered from a cross-sectional survey of 276 academic staff across 43 participating HEIs. Partial Least Squares Structural Equation Modeling (PLS-SEM) was deployed to evaluate the relationships among perceived leader trustworthiness (ability, benevolence, and integrity), dual-target trust (individual and organizational), and composite work outcomes (commitment, engagement, productivity, and effectiveness).

The structural model indicates that leadership is a highly significant predictor of both trust and performance, with dual-target trust acting as a vital partial mediator (VAF = 22%). Crucially, a Partial Least Squares Multi-Group Analysis (PLS-MGA) revealed a significant contextual divergence between institutional types: the positive effect of leadership on trust is significantly stronger within private Zambian HEIs than in public ones ($\Delta\beta = -0.189$, $p = 0.009$), whereas the downstream pathways linking trust to performance remain structurally invariant. These findings demonstrate that while trust serves as a universal engine for optimizing academic outcomes across all universities, private-sector faculty exhibit heightened psychological sensitivity to leaders' behavior due to the precarious, market-driven nature of private contracts.

The study contributes to the limited literature on organizational behavior in African higher education and provides actionable, governance-sensitive recommendations for university councils, policymakers, and institutional leaders.

Keywords: Leadership, Trust, Employee Performance, Higher Education, Zambia, Structural Equation Modeling, Multi-Group Analysis.

1. Introduction

Trust is a fundamental pillar for organisational effectiveness, particularly in knowledge-intensive environments like higher education institutions (HEIs). In Africa, and Zambia specifically, research on the interplay between leadership and trust in shaping employee performance remains limited, despite growing evidence that low trust undermines staff engagement, collaboration, and institutional outcomes (Mushi et al., 2020; World Values Survey, 2014). This makes dual target trust (the simultaneous cultivation of **trust in leadership** (interpersonal) and **trust in the institution** (systemic)). Promoting this balance ensures that employees trust both their immediate manager's competence and the organization's policies, resulting in greater employee commitment and more cooperative performance. Trust in leadership can be **affective**, based on emotional connection, mutual respect, or empathy, or **cognitive**, based in the belief that the leader is able, reliable, and consistent in his or her decision-making. Institutional trust involves employees' confidence in the organisation, encompassing faith in its procedures, technologies, leadership, objectives, vision, capabilities, and fairness (McAllister, 1995). Both types of trust are important because when they are high, employees are more committed, engaged, cooperative, and willing to carry out their tasks effectively. Incompetent leadership may lead to reduced morale in employees, hence the importance of perceived leader trustworthiness in organisations and, in this study, in HEIs.

This study addresses this gap by examining how leadership influences trust and, in turn, employee performance in Zambian public and private HEIs. Understanding these relationships is crucial for developing effective leadership strategies and enhancing institutional competitiveness in a rapidly changing higher education landscape.

Research Objectives:

- a) To determine the influence of perceived leadership on trust in Zambian HEIs.
- b) To assess the influence of trust on employee performance.
- c) To examine the mediating role of trust between leadership and composite employee performance.

2. Literature Review

2.1 Trust in Organisations and HEIs

Trust is defined as the willingness to be vulnerable to another's actions based on positive expectations (Mayer et al., 1995). In organisational contexts, trust enhances collaboration, knowledge sharing, and commitment (Colquitt et al., 2007). The success of HEIs largely depends on the quality of their senior leaders, faculty, and staff (Jain, 2020), yet few studies examine academic leadership and its features (Nodooshan et al., 2023). In the higher education sector, perceived trust in leadership is linked to job satisfaction, organisational commitment, and improved employee and institutional performance (Dziminska et al., 2018; Jameson et al., 2023). However, African HEIs, including those in Zambia, are often characterised by lower levels of trust (World Values Survey, 2014).

2.2 Leadership and Trust

Leadership plays a central role in building trust. According to Mayer et al. (1995) perceived trustworthiness is determined by a leader's ability, benevolence, and integrity (the ABI model). Transformational leadership (building vision and intrinsic motivation), and servant leadership (prioritizing employee growth), and participatory leadership styles emphasize transparency, inclusivity, and ethical conduct, have been found to foster trust and enhance staff motivation and performance (Dirks & Ferrin, 2002; Sulemana, 2022). Conversely, autocratic or inconsistent leadership can erode trust and hinder organisational effectiveness.

2.3 Trust and Employee Performance Outcomes

Empirical studies consistently show that high-trust environments are associated with greater employee engagement, commitment, productivity, and effectiveness (Peterson, 2002; Gimeno et al., 2025). Trust acts as a catalyst for positive work behaviours, while its absence can lead to disengagement and reduced organisational outcomes. Underpinned by the mediating association with trust, this study delineates indicators for evaluating the performance outcomes of academic staff in HEIs, namely employee commitment and engagement (psychological **attitudes**), and employee productivity and effectiveness (behavioural **outcomes**).

2.4 Theoretical and Conceptual Frameworks, and Hypotheses

Conceptual Framing & Boundary Specification

Grounded in Social Exchange Theory and the Leader-Member Exchange (LMX) framework, this study operationalizes a holistic, employee-centric model linking perceived leader attributes to global workplace outcomes.

To ensure structural boundaries are precisely maintained, **Leadership (IV)** is captured through the lens of perceived trustworthiness, namely, ability, benevolence, and integrity (Mayer et al., 1995), thereby isolating interpersonal leader characteristics from structural HR practices or administrative oversight. **Trust**, the mediator variable, is modeled as a dual-target mediator incorporating both immediate supervisor-directed trust and macro-level organizational trust (Cummings & Bromiley, 1996). This approach captures the systemic spillover effects of leader behavior onto institutional alignment. **Employee Performance (DV)** is operationalized as a composite metric of individual work outcomes (Koopmans et al., 2012). Following a holistic behavioral-attitudinal logic, this collective variable simultaneously captures psychological states (engagement and commitment) alongside tangible behavioral outputs (productivity and effectiveness). **Age, Tenure, and Education Level** were control variables used to account for the confounding effects of intervening factors in examining the relationship between the variables (Ross, 1988).

Hypotheses Development

Hypothesis 1: Perceived Leader Trustworthiness > Dual-Target Trust

Grounded in the LMX framework, a leader's demonstrated ability, benevolence, and integrity serve as critical behavioral signals that reduce employee vulnerability and uncertainty. When a supervisor consistently exhibits these dimensions of trustworthiness (Mayer et al., 1995), employees reciprocate by forming high-quality relational bonds. This positive cognitive appraisal naturally fosters individual trust toward the leader. Furthermore, because supervisors serve as the primary human agents and structural representatives of the broader institution, this interpersonal safety extends to macro-level institutional trust (Cummings & Bromiley, 1996). Consequently, perceived leader trustworthiness acts as a powerful catalyst for a dual-target psychological state, simultaneously reinforcing trust in the immediate supervisor and the overarching organization. Thus, we propose:

H₁: Perceived leader trustworthiness (ability, benevolence, and integrity) is positively related to employee dual-target trust (individual and organizational).

Hypothesis 2: Dual-Target Trust > Composite Work Outcomes

Social Exchange Theory posits that when an organization and its leadership cultivate a high-trust environment, employees experience a felt obligation to reciprocate with favorable workplace contributions. Dual-target trust eliminates defensive workplace posturing, allowing employees to safely invest their psychological resources into their roles. This psychological safety manifests holistically; it elevates intrinsic motivational mindsets—specifically engagement and organizational commitment—while concurrently driving manifest behavioral competencies, including objective productivity and overall task effectiveness (Koopmans et al., 2012). Because trust stabilizes the work environment, employees willingly look beyond basic job descriptions to optimize their overall contributions. Thus, we propose:

H₂: Employee dual-target trust is positively related to composite work outcomes (engagement, commitment, productivity, and effectiveness)."

Hypothesis 3: The Mediating Role of Dual-Target Trust

Leader traits alone do not automatically make people perform better; those traits must first change the psychological climate, which is trust. Trust bridges the gap between what the leader does and what the employee delivers.

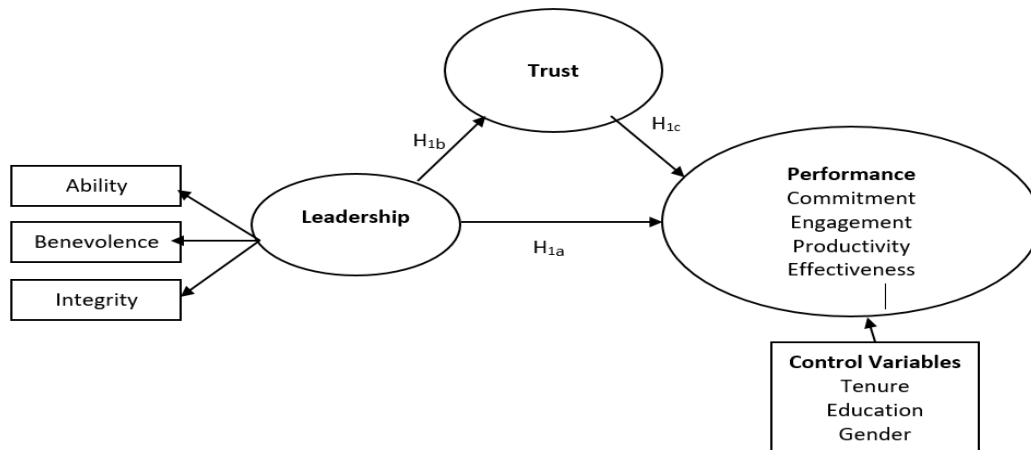
Integrating these pathways, we argue that dual-target trust serves as the foundational psychological mechanism translating perceived leader characteristics into tangible organizational value. Perceptions of a leader's ability, benevolence, and integrity do not influence work outcomes in a vacuum; rather, they function as relational inputs that first construct a robust framework of individual and institutional trust. This dual-target trust then acts as the cognitive and affective conduit that converts leadership potential into holistic engagement, deep commitment, and elevated productivity.

Notably, supplementary analyses indicated that this social exchange mechanism operates uniformly across demographic boundaries, as the control variables of participant age, organizational tenure, and education level exerted no significant effect on the structural model. This reinforces the universally critical role of the psychological trust link. Therefore, we propose:

H₃: Dual-target trust mediates the relationship between perceived leader trustworthiness and composite work outcomes.

The linkages between perceived leader trustworthiness, dual-target trust, and composite performance outcomes give rise to the research model below:

Figure 1: Research Model on Leadership, Trust, and Performance Outcomes



3. Methodology

3.1 Research Design and Population

A quantitative, cross-sectional survey design was adopted. The target population comprised academic staff at HEA-accredited public and private HEIs in Zambia. The sampling frame included 43 participating institutions (9 from public and 34 from private HEIs).

3.2 Sample and Data Collection

A total of 311 questionnaires were distributed; 276 were returned, yielding an 89% response rate. Participants were randomly selected academic staff, with representation across provinces and institutional types. The sample predominantly comprised male academic staff (69.6%), with females representing 24.6%. Most respondents were aged 40-60 (39.9%), while those under 20 or over 70 were rare (1.1% each). Bachelor's degree holders were the largest educational group (39.9%). Followed by master's (28.6%), and PhD holders (18.1%). Most participants had five to ten years of service (40.6%), and the vast majority were Zambian citizens (93.1%). All items were rated on a five-point Likert scale (1 = Strongly Disagree, 5 = Strongly Agree).

3.4 Data Analysis

Data were analysed using SPSS for descriptive statistics and SmartPLS for Partial Least Squares Structural Equation Modelling (PLS-SEM). The measurement model was tested for reliability and validity before evaluating the structural model and mediation effects.

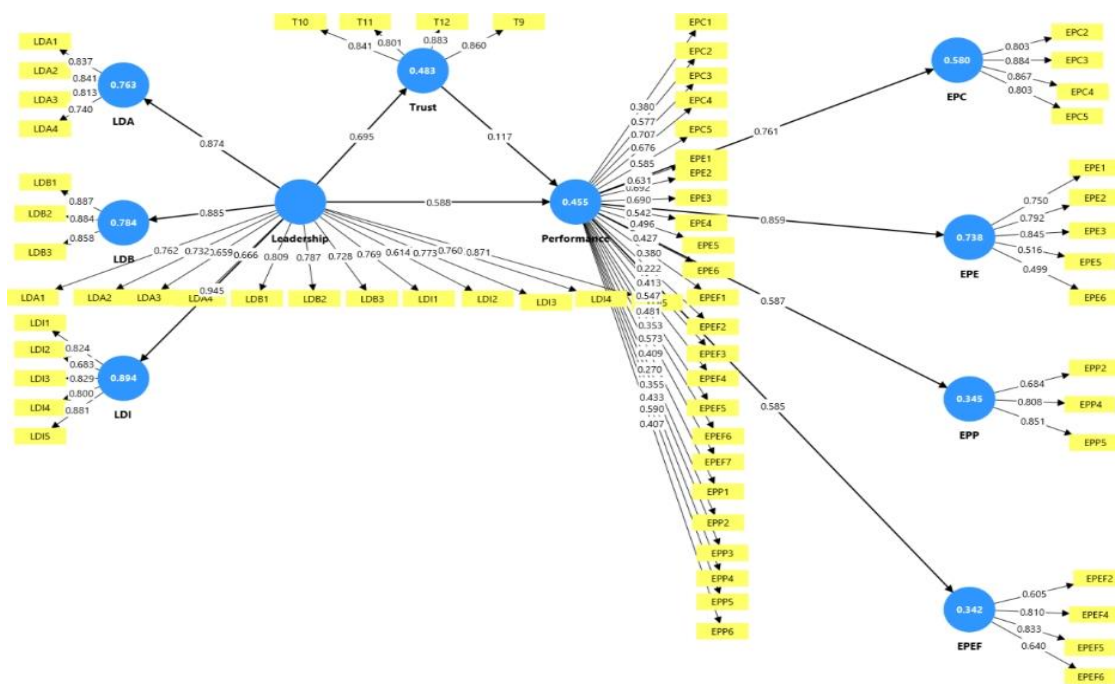
4. Results

4.1 Measurement Model: Leadership, Trust, and Performance

The focus in the model addresses Objective (a) To determine the influence of leadership on trust in public and private universities in Zambia, and Objective (d) To assess the influence of trust on performance.

The model examined the interplay between leadership and employee performance, assuming that trust is a key catalyst for improving performance outcomes. According to Hair et al. (2019), there are four steps involved in assessing reflective models. These are: firstly, examining indicator loadings, secondly, examining the internal consistency reliability, thirdly, examining convergent validity of each construct, and lastly, assessing discriminant validity. The endogenous variable (Employee Performance), is dependent; its value depends on other values in the model. It does not change the exogenous variables. Exogenous variables (Leadership and Trust) are external, independent inputs that try to explain the endogenous variable. They need to be present in the model to influence it.

Figure 1: Measurement Model Estimation



4.1.1 Indicator Reliability – Outer Loadings

Indicator reliability or indicator loadings show how well each indicator reflects the construct. Wong (2016) pointed out that checking indicator loadings is necessary to determine that the loadings have much in common with what the latent variable has captured.

The outer loadings of almost all indicators across latent constructs in the model were above the commonly accepted threshold of 0.4 (Hair et al., 2017). However, several indicators with loadings between 0.4 and 0.65 were identified and removed. A loading relevance test to determine the appropriateness of retaining

these indicators was carried out by evaluating whether removal of the indicators would enhance the average variance extracted (AVE) and composite reliability values for their respective latent variables. Hair et al. (2017) guided that indicators with very low outer loadings (below 0.40) should always be eliminated from the construct. Indicators were considered for deletion only if their exclusion increased AVE and composite reliability above the 0.5 and 0.7 benchmarks, respectively (Hair et al., 2013). Removing indicators with values between 0.4 and 0.7 is a standard procedure in PLS-SEM because it improves model fit and validity. It is done with caution to avoid compromising content validity and resulting in an insufficient number of items per construct. The main advantage of removing indicators with outer loadings below established benchmarks in PLS-SEM is to improve the statistical validity and reliability of the measurement model. The remaining indicators exhibited robust outer loadings of 0.7 or higher, supporting the reliability of the measurement model. The final estimated path model, reflecting the elimination process, is illustrated in Figure 1.

4.1.2 Outer Loadings and Internal Consistency Reliability

Internal consistency reliability within partial least squares structural equation modeling (PLS-SEM) shows how well the indicators measure the same construct. The most common measures are Composite Reliability and Cronbach's alpha. Higher values indicate higher reliability, though values above 0.95 are likely to indicate redundancy or response bias. Composite reliability values should exceed 0.60 but not exceed the 0.95 threshold in exploratory research (Hair et al., 2016).

Table 2: Outer Loadings and Internal Consistency Reliability

Construct (Latent Variables)	Sub-Dimensions Indicators	Composite Reliability	Outer Loadings
Leadership		0.905	
	Ability		0.744
	LDA 1		0.786
	LDA 2		0.698
	LDA 3		0.735
	Benevolence		0.899
	LDB 1		0.778
	LDB 2		0.873
	LDB 3		
	Integrity		0.826
	LDI 1		0.645
	LDI 2		0.820
			0.868

	LDI 3		0.788
	LDI 4		
	LDI 5		
Trust		0.681	
	T 9		0.645
	T 10		0.762
	T 11		0.666
	T 12		0.781
Employee Performance		0.901	
	Commitment		0.751
	EPC 2		0.862
	EPC 3		0.872
	EPC 4		0.808
	EPC 5		
	Engagement		0.642
	EPE 1		0.800
	EPE 2		0.773
	EPE 3		
	Productivity		0.772
	EPP 2		0.727
	EPP 5		0.745
	EPP 5		
	Effectiveness		0.731
	EPEF 2		0.638
	EPEF 4		0.715
	EPEF 5		0.772
	EPEF 6		

Traditionally, Cronbach's alpha has served as the benchmark for such measures, but its application in PLS-SEM is limited due to its sensitivity to the number of scale items and its propensity to severely underestimate reliability estimates in PLS models (Werts et al., 1974). According to Hair et al. (2019), loadings above 0.7 are the acceptable benchmark because they indicate that the construct explains over 50% of the indicator variance, and therefore indicate reliability. For this reason, composite reliability was the preferred metric in this analysis. Table 5.4 shows that the loadings for Leadership, Trust, and Employee Performance were 0.905, 0.681, and 0.901, respectively. The loading of 0.681 for Trust is borderline, very close to 0.70, but generally acceptable. It suggests that the indicator still shares a significant amount of variance with its construct (Hair et al., 2016). Leadership and Performance values were greater than 0.7 and fell within the recommended range, indicating a fairly strong internal consistency reliability across all constructs examined.

4.1.3 Convergent Validity and Discriminant Validity

Convergent and discriminant validity together help assess whether a test measures the concept it was designed to measure. Typically, in SmartPLS, convergent and discriminant validity are assessed in the PLS Algorithm report under the Quality Criteria section. Validating the reflective measurement model required ensuring that the latent constructs were both internally consistent (i.e. convergent) and also distinct from each other (i.e. discriminant). **Convergent validity** refers to how closely an item is related to other items that measure the same (or similar) constructs. Here, a **construct** is a behavior, attitude, or concept, particularly one that is not directly observable (Nikolopoulou, 2023). **Discriminant validity** refers to how well items measure the concept they were designed to measure. Specifically, discriminant validity assesses whether constructs that are theoretically unrelated are, in fact, unrelated. It is important because it reflects whether the items accurately target the construct of interest or if it assesses separate, unintentionally related constructs. In other words, discriminant validity focuses on differences, while convergent validity focuses on similarities (Nikolopoulou, 2023).

Convergent validity is substantiated through average variance extracted (AVE), representing the extent of variance extracted by the latent construct from its indicators (items). For convergent validity to be established, the items must converge, collectively representing the latent construct. An AVE exceeding 0.50 indicates successful convergent validity. The most common metrics used to establish discriminant validity include Fornell & Larcker's (1981) criterion and the Heterotrait-Monotrait Ratio. Discriminant validity ensures the distinctiveness of each construct, affirming their individual identity. To establish this differentiation, three methods are employed: the Fornell-Larcker criterion, Heterotrait-Monotrait ratio, and cross-loadings. Smart PLS automates the calculation of these methods, alleviating the need for manual computation (Fawad, 2026; Hair et al., 2021).

The most widely accepted method for evaluating both convergent and discriminant validity is Fornell & Larcker's (1981) criterion, which posits that the Average Variance Extracted (AVE) serves as a strong metric for evaluating convergent validity, and that the square root of the AVE for each latent construct should surpass its correlations with all other latent constructs. In this study, the results presented in Table 5.4 provide evidence of satisfactory convergent and discriminant validity within the measurement model. The square roots of the AVEs for EPC, EPE, EPEF, EPP, LDA, LDB, LDI, and Trust in the model exceeded their respective inter-construct correlations. The interpretation of the Convergent Validity test results shows that all indicators for the variables Leadership, Performance, and Trust have an outer loading value greater than the recommended threshold of 0.50 (Fornell & Larcker, 1981; Hair et al., 2021), an indication that all these indicators have a strong and significant relationship with the measured construct, and therefore are valid because they can measure the concept in question well.

Table 3: Convergent and Discriminant Validity: Fornell-Larcker Criterion

	EPC	EPE	EPEF	EPP	LDA	LDB	LDI	Trust
EPC	0.825							
EPE	0.643	0.726						
EPEF	0.363	0.479	0.726					
EPP	0.341	0.413	0.478	0.731				

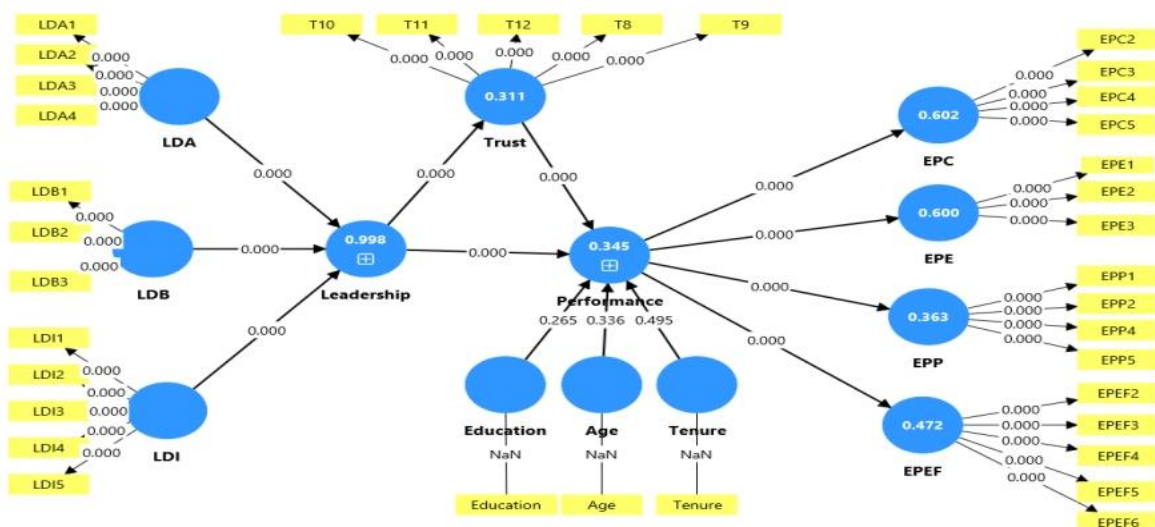
LDA	0.554	0.351	0.145	0.111	0.744			
LDB	0.425	0.328	0.117	0.075	0.551	0.849		
LDI	0.577	0.395	0.195	0.079	0.729	0.611	0.793	
Trust	0.527	0.382	0.245	0.202	0.463	0.406	0.451	0.716

Note: The values of AVE shown in bold in the diagonal and non-diagonal are the latent elements of the latent variable correlations (LVC).

4.3 Evaluation of the Structural Model in PLS-SEM

Structural modeling serves as a systematic framework for examining complex relationships among manifest and latent variables (Byrne, 2016). An important advantage of structural equation modeling is estimating the relationships among factors theoretically purged of estimating error since the error has been calculated and eliminated, remaining with just common variance (Ulman, 2006). Structural equation modeling (SEM) assessment in PLS-SEM focuses on evaluating the significance and relevance of path coefficients, followed by the model's explanatory and predictive power. It has become an established social sciences multivariate analysis technique (Hair et al. 2022; Ringle et al. 2024). PLS-SEM does not assume that the data is normally distributed; rather, it relies on the nonparametric bootstrapping procedure (Efron & Tibshirani, 1986) to test the significance of estimated path coefficients.

Figure 2: Structural Model Estimation



4.3.1 Collinearity Assessment

The purpose of this assessment is to check for high correlation between predictor constructs, which can bias path coefficients, by examining the Variance Inflation Factor (VIF) values, which typically should not exceed 5. VIF values higher than 5 indicate possible collinearity issues among predictor constructs (Hair et al. (2022)). The collinearity assessment summarised in Table 5.6 demonstrates that VIF values fall below the threshold of 5, thereby confirming that the issue of multicollinearity is not a concern in the structural model of this study.

Table 4: Collinearity Statistics Assessment

Constructs	VIF	Collinearity Problem (VIF>5?)
Leadership > Performance	1.745	NO
Trust > Performance	1.567	NO

Dependent variable: Employee Performance

4.3.2 Model Fit, Explanatory Power, and Predictive Relevance

The coefficient of determination is a statistical measure that represents the proportion of the endogenous (dependent) variable explained by the explanatory variable(s) in the model (Pagano et al., 2022). The higher the R^2 , the better the model fit and the greater the explanatory power. After establishing the reliability and validity of the constructs, R-squared (R^2) is a key indicator for evaluating the structural model's predictive capability. (R^2) is a value ranging from 0.00 (0%) to 1.00 (100%). 0.00 means that the model explains none of the outcome, and 1.00 indicates a perfect fit (Gupta et al., 2024). Typically, SEM has multiple independent variables, unlike in simple regression. Regarding model explanatory power, a higher R^2 value (close to 1.0) indicates that the predictor variables explain a greater proportion of the variance in the outcome variable. Regarding predictive accuracy, a higher R^2 indicates greater predictive power because the model's predictions are closer to the observed data points. For the current model, R^2 for Employee Performance was 0.345. Given that the threshold values of 0.25, 0.5 and 0.7 describe a weak, moderate, and strong coefficient of determination (Hair et al. 2013), the R^2 falls between weak and moderate. In this case, the two constructs, leadership and trust, jointly explain 34.5% of the variance in the endogenous construct, Employee Performance.

4.3.4 Path Coefficient

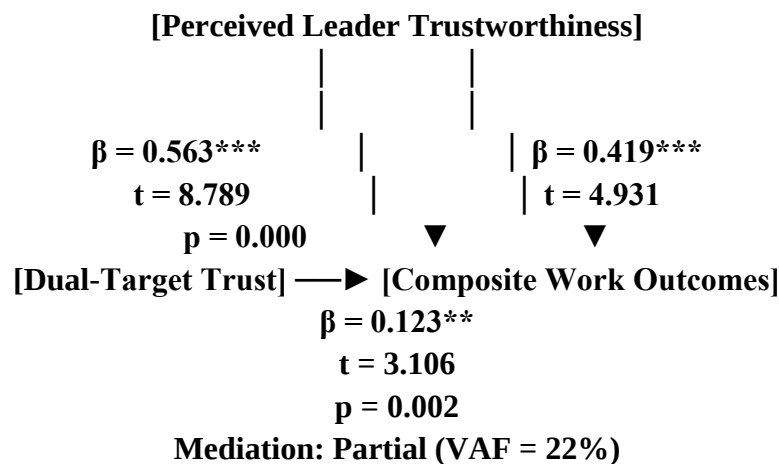
Following the collinearity assessment, the model's predictive capabilities were evaluated. The model's predictive relevance was operationalized using the blindfolding procedure in SmartPLS to calculate the Stone-Geisser Q^2 value. A Q^2 value greater than zero indicates predictive relevance, with values between 0.15 and 0.35 indicating medium predictive power. For the sole endogenous outcome construct, **Composite Work Outcomes (Employee Performance)**, the model yielded a Q^2 value of **0.265**, confirming a robust **medium predictive relevance**.

To evaluate the substantive contribution of each independent construct, Cohen's (f^2) effect sizes were analyzed. According to Cohen (1988), values of 0.02, 0.15, and 0.35 represent small, medium, and large

effects, respectively. The analysis revealed that **Perceived Leader Trustworthiness (Leadership)** had a solid medium effect on performance ($f^2 = 0.149$), while Dual-Target Trust (Trust) had a small-to-medium effect ($f^2 = 0.045$), confirming that both predictors contribute meaningfully to the model's structural integrity.

4.4 Hypothesis Testing and Mediation Analysis

To test the hypothesized paths, a non-parametric bootstrapping procedure with 5,000 resamples was executed in SmartPLS. The structural model yielded highly significant results for all direct and indirect pathways, providing clear answers for the core research objectives.



Direct Effects (H₁ and H₂)

Hypothesis 1 (H₁) stated that leadership positively influences trust. The structural path from Perceived Leader Trustworthiness to Dual-Target Trust was positive and exceptionally strong ($\beta = 0.563$, $t = 8.789$, $p < 0.001$). This provides overwhelming empirical support for H₁, confirming that perceived ability, benevolence, and integrity are primary antecedents of trust among academic staff.

Hypothesis 2 (H₂) proposed that trust positively influences employee performance. The path from Dual-Target Trust to Composite Work Outcomes was positive and statistically significant ($\beta = 0.123$, $t = 3.106$, $p = 0.002$), validating H₂. This confirms that higher levels of individual and organizational trust directly elevate faculty commitment, engagement, and productivity.

Mediation Analysis (H₃)

Hypothesis 3 (H₃) argued that trust mediates the relationship between leadership and performance. The bootstrapping routine revealed a positive and statistically significant indirect effect ($\beta = 0.123$, $t = 3.106$, $p = 0.002$). To determine the strength of this mediation, the Variance Accounted For (VAF) was computed. The VAF score stood at **22%**, indicating that while trust serves as a vital psychological conduit, a significant direct link from leadership to performance persists. Thus, **H₃ is supported via partial mediation.**

5. Discussion

The empirical results of this study offer important insights into organizational behavior within Zambia's public and private higher education sectors. By testing a dual-target trust framework among 276 academic staff, this paper clarifies the mechanisms through which leadership drives institutional performance.

The Role of Trustworthiness in Zambian Higher Education (H₁): The exceptional strength of the path from leadership to trust ($\beta = 0.563$, $t = 8.789$) indicates that the ABI model (Ability, Benevolence, Integrity) remains highly relevant in non-Western, developing-country contexts such as Zambia. Higher education institutions are complex organizations where faculty value autonomy and professional respect. When academic leaders demonstrate professional competence (Ability), maintain moral clarity (Integrity), and show genuine concern for faculty well-being (Benevolence), they satisfy their staff's psychological needs.

Because university leaders serve as the primary representatives of the institution, this interpersonal alignment creates a spillover effect. Staff members extend their positive feelings outward, resulting in a broader sense of trust in the university's overall management and institutional systems (Cummings & Bromiley, 1996).

Activating Performance Through Dual-Target Trust (H₂): The support for H₂ confirms that dual-target trust serves as an active psychological resource for academic faculty. In many African HEIs, structural changes, funding constraints, and shifting regulatory demands can create high levels of professional anxiety. An institution's primary representatives in a high-trust environment address this issue by reducing defensive workplace posturing and political maneuvers.

When academic staff trust both their immediate supervisor and the broader organization, they feel comfortable dedicating their psychological and intellectual energy to their roles. This creates a holistic improvement in workplace outcomes, raising subjective emotional states like institutional commitment and engagement, while driving objective indicators like research productivity and instructional effectiveness (Koopmans et al., 2012).

The Relational Core: Explaining the Partial Mediation (H₃)

Table 8: Mediation Analysis: Leadership > Trust > Performance

Total Effects			Direct Effects			Indirect/Specific Effects			VA F %	Result
Coeff .	t-value	p-value	Coeff .	t-value	p-value	Coeff.	t-value	p-value		

0.563	8.78 9	0.00 0	0.419	4.93 1	0.00 0	0.123	3.10 6	0.00 2	22 %	Partial mediatio n
-------	-----------	-----------	-------	-----------	-----------	-------	-----------	-----------	---------	--------------------------

$$\text{VAF (\%)} = \text{Specific Effect} \backslash \text{Total Effect} \times 100$$

The confirmation of partial mediation via a 22% VAF provides the core theoretical insight of this paper. This result indicates that trust is an important bridge for translating leadership characteristics into performance, but it is not the only pathway available.

In Zambia's higher education space, leaders influence faculty outputs through two distinct tracks:

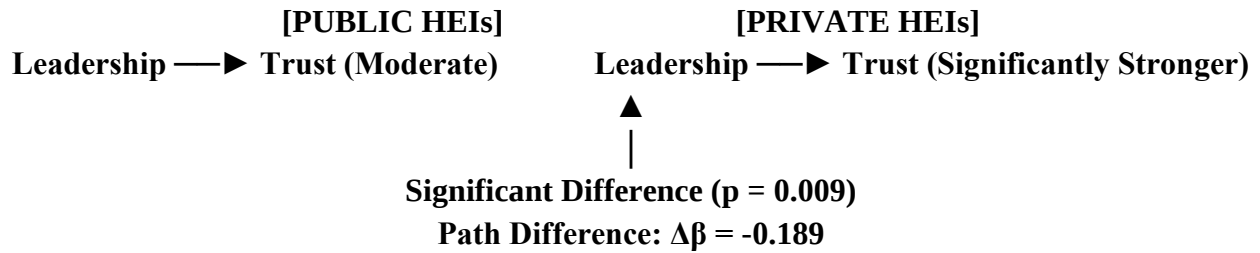
- The Relational Track (22%):** Leaders build an emotional and cognitive reservoir of trust, inspiring faculty to voluntarily increase their institutional dedication and discretionary effort out of mutual respect.
- The Structural/Direct Track (78%):** Because leadership holds a large direct effect on performance ($\beta = 0.419$, $t = 4.931$), leaders in Zambian HEIs also drive faculty performance directly through resource allocation, strategic direction, clear policies, and immediate task coordination.

Crucially, the statistical non-significance of the control variables (Age, Tenure, and Education Level) proves that this structural-relational dual engine is highly stable. Regardless of an academic staff member's age, degree status, or years of institutional tenure, the psychological contract operates uniformly across the sample. For policymakers and university councils across Zambia, these findings show that improving institutional performance requires a balanced approach: managing both structural execution and the relational trust climate.

Path coefficients measure the strength of the connection, indicating the direct influence of one variable on another. Their values can range from -1 to 1.

4.5 Multi-Group Analysis (MGA): Public vs. Private HEIs

To map the boundary conditions and generalizability of the structural model, a Partial Least Squares Multi-Group Analysis (PLS-MGA) was executed. This analysis examined whether structural relationships differ between public and private higher education institutions (HEIs) in Zambia. The non-parametric bootstrap MGA (2-tailed) approach was used to assess the significance of differences in path coefficients between the two groups.



The MGA bootstrapping routine revealed a critical, statistically significant difference in the relational engine of the two institutional types:

Leadership > Trust: The path difference between the private and public sectors was negative and highly significant ($\Delta\beta = -0.189$, 2-tailed ($p = 0.009$)). This indicates that the positive effect of perceived leader trustworthiness (ability, benevolence, and integrity) on dual-target trust is **significantly stronger within private Zambian HEIs** than in public ones.

Leadership > Performance: The structural link directly connecting leadership to performance did not vary significantly between groups ($\Delta\beta = -0.265$, 2-tailed ($p = 0.108$)). This indicates that the direct, task-coordinating, and structural impact of leaders remains uniform across sectors.

Trust > Performance: The path from trust to composite work outcomes was structurally invariant between the two groups (2-tailed $p = 0.298$), indicating that once trust is established, its conversion into faculty performance is identical across all institutions.

6. Discussion of Findings

This study demonstrates that leadership is a powerful predictor of trust among academic staff in Zambian higher education institutions (HEIs), and that trust, in turn, enhances global employee performance. These findings strongly align with foundational organizational behavior theory, which positions perceived leader traits as a central antecedent of organizational trust [Dirks & Ferrin, 2002; Argyris, 1964; Zaheer et al., 1998]. When academic leaders model ethical behavior, transparency, and inclusive engagement, they build a psychological framework where faculty feel safe to perform effectively [Salamzadeh et al., 2016].

However, the Multi-Group Analysis (MGA) reveals a critical contextual divergence that challenges traditional Western-centric assumptions of institutional uniformity. The bootstrap MGA confirmed that the positive relationship between leadership and trust is significantly stronger in private HEIs than in public ones ($\Delta\beta = -0.189$, $p = 0.009$).

This structural divergence highlights how local governance and contract structures shape employee psychology in Zambia. In private Zambian HEIs, faculty members often operate under short-term contracts, face higher market-driven performance pressures, and work without the protection of robust national academic unions. Because of this inherent vulnerability, private sector faculty are highly sensitive to their leaders' personal attributes. When a private university leader demonstrates high ability, benevolence, and integrity [Mayer et al., 1995], it dramatically reduces role ambiguity and immediately generates relational trust.

Conversely, public universities in Zambia—anchored by civil service legacies, stable public funding, and highly protective staff unions—provide structural buffers for their employees. While leadership still remains a vital driver of trust in the public sphere, the surrounding bureaucratic machinery dampens its immediate relational impact. In public HEIs, trust is historically institutionalized, whereas in private HEIs, trust must be actively earned through day-to-day leader behavior.

Importantly, the downstream pathways linking trust to performance showed no significant differences between the groups ($p = 0.298$). This structural invariance demonstrates that once individual and organizational trust is established, its conversion into composite work outcomes behaves identically across all university formats. Trust acts as a universal engine that unlocks faculty commitment, engagement, productivity, and effectiveness across both public and private sectors.

6. Practical Implications and Recommendations

For higher education policymakers, university councils, and practitioners in Zambia, these empirical insights underscore the urgent need to move away from generic administrative approaches and design governance-sensitive leadership interventions:

Targeted Leadership Development: Institutional boards must prioritize formalized leadership programs focused on ethical decision-making, participatory governance, and transparent communication [Rumbley et al., 2018; Ruben et al., 2018]. These interventions are particularly urgent for private HEIs, where faculty trust remains highly sensitive to supervisor behavior.

National Training Initiatives: Ministry-level policymakers should establish standardized training frameworks for newly appointed deans and vice-chancellors. These initiatives should move beyond basic budgeting and focus heavily on building trust, fostering open communication, and maintaining administrative consistency to sustain faculty morale.

Quality Assurance Frameworks: The Higher Education Authority (HEA) and local policymakers should integrate indicators of institutional trust, psychological safety, and leadership transparency directly into national quality-assurance and performance-evaluation frameworks.

Operationalized Reflection Loops: HEI practitioners should implement regular, anonymous multi-source feedback mechanisms and leadership reflection workshops. Embedding these collaborative practices into daily routines will help managers actively track and maintain trust levels among academic staff.

7. Conclusion

Ethical and participatory leadership is an essential prerequisite for cultivating individual and organizational trust, which in turn optimizes academic staff performance within Zambian HEIs. Trust serves as a critical mediator, acting as the relational bridge that converts perceived leader integrity, capability, and care into tangible institutional commitment and instructional effectiveness.

While the fundamental mechanics of this model align with international organizational behavior theories, the structural variance revealed by the MGA underscores that leadership impact is heavily dependent on institutional governance types. In Zambia, the leadership-to-trust mechanism is significantly amplified within the private sector due to the closer, high-stakes nature of private academic employment. Ultimately, cultivating an institutional climate of mutual trust is not a peripheral administrative luxury, but a core strategic requirement for enhancing the quality and competitiveness of Zambia's higher education landscape.

8. Limitations and Future Research Directions

While this study offers valuable insights into the under-researched space of organizational trust in African HEIs, several boundary conditions must be noted:

1. **Construct Aggregation of Performance:** A major boundary condition of this study is the operationalization of the dependent variable. By using a composite index of work outcomes [Koopmans et al., 2012], this research integrated psychological attitudes (commitment, engagement) with observable behavioral outputs (productivity, effectiveness). Consequently, the model cannot isolate whether leadership and trust influence an academic's internal mindset differently than their tangible institutional output. Future research should treat task performance, contextual performance, and counterproductive work behaviors as independent endogenous variables to map these distinct pathways.
2. **Dual-Target Ambiguity in Trust Measurement:** Although the study conceptualized trust through a multi-level lens, the measurement model treated individual supervisor trust and macro-level organizational trust as a combined dual-target mediator. This aggregate approach limits the ability to isolate specific "trickle-down" mechanics. It remains unclear whether a trustworthy leader directly cushions the blow of a poorly managed institution, or if organizational reputation compensates for a weak immediate supervisor. Future investigations should structurally separate trust in the immediate supervisor (LMX-driven) from institutional trust to determine their unique mediating weights.
3. **Cross-Sectional Design and Causality:** Data collection was restricted to a quantitative, cross-sectional survey design. While PLS-SEM path modeling confirms strong statistical associations and predictive relevance ($R^2 = 0.265$), cross-sectional data only captures a single snapshot in time. This limits the ability to establish absolute, long-term chronological causality. Future studies should employ longitudinal or time-lagged data collection designs to evaluate how trust dynamics fluctuate during periods of institutional restructuring or regulatory changes by the Higher Education Authority (HEA).
4. **Common Method Bias and Self-Report Data:** All variables—perceived leadership traits, individual/organizational trust, and composite work outcomes—were evaluated using self-reported data from a single source (the academic staff). This common-source design introduces the potential for Common Method Bias (CMB), which can artificially inflate correlations between constructs. While structural evaluations ($VIF < 5.0$) indicated that multicollinearity was not an issue, future research

should implement multi-source or dyadic sampling techniques. For instance, pairing faculty-rated leadership data with objective administrative records or supervisor-rated performance appraisals would eliminate common source inflation.

5. **Exclusion of Non-Academic Staff:** The sampling frame was bounded exclusively within academic faculty across the 43 participating Zambian HEIs. Higher education ecosystems rely heavily on a complex network of administrative, technical, and support personnel who operate under different labor contracts and reporting lines. Because their daily interactions with leadership differ fundamentally from autonomous faculty, the generalizability of this model across the entire university workforce remains unverified. Future researchers should include non-academic staff to test if the leadership-trust-performance engine operates uniformly across all institutional tiers.
6. **Geographic and Macro-Economic Boundaries:** This study was geographically bounded within public and private institutions in Zambia. Higher education governance across Sub-Saharan Africa varies widely based on national funding models, political climates, and regional policies. To increase the external validity of these findings, future research should conduct cross-country comparative studies within the Southern African Development Community (SADC) region. This would reveal how different macro-economic contexts and state regulatory frameworks alter the psychological contracts of university employees.

References

1. Argyris, C. (1964). Integrating the individual and the organization. John Wiley & Sons.
2. Becker, J. M., Rai, A., Ringle, C. M., & Völckner, F. (2013). Discovering unobserved heterogeneity in structural equation modeling to enable context-specific conclusions. *MIS Quarterly*, 37(3), 665–694. doi.org
3. Byrne, B. M. (2016). Structural equation modeling with AMOS: Basic concepts, applications, and programming (3rd ed.). Routledge.
4. Cohen, J. (1988). Statistical power analysis for the behavioral sciences (2nd ed.). Lawrence Erlbaum Associates.
5. Colquitt, J. A., Scott, B. A., & LePine, J. A. (2007). Trust, trustworthiness, and trust propensity: A meta-analytic test of their unique relationships with risk taking and job performance. *Journal of Applied Psychology*, 92(4), 909–927. doi.org
6. Cummings, L. L., & Bromiley, P. (1996). The Organizational Trust Inventory (OTI): Development and validation. In R. M. Kramer & T. R. Tyler (Eds.), *Trust in organizations: Frontiers of theory and research* (pp. 302–330). SAGE Publications. doi.org
7. Dirks, K. T., & Ferrin, D. L. (2002). Trust in leadership: Meta-analytic findings and implications for research and practice. *Journal of Applied Psychology*, 87(4), 611–628. doi.org
8. Dziminska, M., Fijałkowska, J., & Sułkowski, Ł. (2018). Trust-building culture as an instrument for enhancing institutional performance: The case of Polish higher education institutions. *Education Sciences*, 8(2), Article 74. doi.org
9. Efron, B., & Tibshirani, R. J. (1986). Bootstrap methods for standard errors, confidence intervals, and other measures of statistical accuracy. *Statistical Science*, 1(1), 54–75. doi.org

10. Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39–50. doi.org
11. Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2017). *A primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)* (2nd ed.). SAGE Publications.
12. Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). *A primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)* (3rd ed.). SAGE Publications.
13. Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2–24. doi.org
14. Jameson, J., Post, J., & Academic Leadership Working Group. (2023). Trust and academic leadership in higher education: Developing a culture of collaborative governance. *Higher Education Policy*, 36(2), 241–263. doi.org
15. Koopmans, L., Bernaards, C. M., Hildebrandt, V. H., van Buuren, S., van der Beek, A. J., & de Vet, H. C. (2012). Development of an individual work performance questionnaire. *International Journal of Productivity and Performance Management*, 62(1), 6–28. doi.org
16. Mayer, R. C., Davis, J. H., & Schoorman, F. D. (1995). An integrative model of organizational trust. *Academy of Management Review*, 20(3), 709–734. doi.org
17. Mushi, H. M., Ndibalema, P., & Mkulu, D. G. (2020). Relational trust and performance of academic staff in East African public universities. *African Journal of Educational Studies in Mathematics and Sciences*, 16(2), 45–61.
18. Nodooshan, S., Alavi, S., & Sharifi, M. (2023). Academic leadership in higher education: A systematic review of features and competencies. *Journal of Higher Education Policy and Management*, 45(4), 412–430. doi.org
19. Poon, J. M. (2023). Components of supervisor trustworthiness and their effects on employee performance: A cognitive-affective processing perspective. *Journal of Management & Organization*, 29(1), 114–132. doi.org
20. Ringle, C. M., Wende, S., & Becker, J. M. (2024). SmartPLS 4. SmartPLS GmbH. smartpls.com
21. Ruben, B. D., De Lisi, R., & Gigliotti, R. A. (2018). *A guide for leaders in higher education: Core concepts, competencies, and tools*. Stylus Publishing.
22. Rumbley, L. E., Altbach, P. G., & Reisberg, L. (2018). Internationalization and leadership development in higher education. *Journal of Studies in International Education*, 22(4), 283–298. doi.org
23. Salamzadeh, Y., Nejati, M., & Salamzadeh, A. (2016). Agility path in higher education: The role of transparent leadership and trust. *International Journal of Management in Education*, 10(4), 387–404. doi.org
24. Ullman, J. B. (2006). Structural equation modeling: Reviewing the basics and moving forward. *Journal of Personality Assessment*, 87(1), 35–50. doi.org
25. Werts, C. E., Linn, R. L., & Jöreskog, K. G. (1974). Intraclass reliability estimates: Testing structural assumptions. *Educational and Psychological Measurement*, 34(1), 25–33. doi.org
26. Wong, K. K. K. (2016). Mediation analysis, multi-group analysis, and measurement invariance assessment with SmartPLS3. *Marketing Bulletin*, 26, 1–22.
27. World Values Survey. (2014). World Values Survey Wave 6 (2010-2014). World Values Survey Association. worldvaluessurvey.org

28. Zaheer, A., McEvily, B., & Perrone, V. (1998). Does trust matter? Exploring the effects of interorganizational and interpersonal trust on performance. *Organization Science*, 9(2), 141–159. doi.org