

**THE MODERATING EFFECT OF LEADERSHIP STYLE ON THE
RELATIONSHIP BETWEEN ORGANIZATIONAL CULTURE AND EMPLOYEE
PERFORMANCE OF PUBLIC SERVICE IN NORTH-CENTRAL NIGERIA**

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Abstract

The research work investigates the moderating influence of leadership style on the nexus between organizational culture and employee performance among public civil servants in North-Central Geopolitical Zone of Nigeria. A survey research design through a quantitative approach is adopted, with data collected from 467 respondents selected using systematic random sampling from a population of 3,512 civil servants in the Offices of the Head of Service across Niger, Nasarawa, and Kwara States. 405 copies of the questionnaire were retrieved for data analysis. PLS-SEM analysis facilitated hypothesis testing and statistical measurement of relationships. Findings revealed that organizational culture proxies (work culture and compensation culture) have a significant effect on employee performance, while leadership style does not moderate or strengthen these relationships. The paper therefore, recommends that public service management should enhance workplace culture and communication through transparency, collaboration, and employee involvement, while policymakers promote positive culture and provide leadership training to strengthen managerial competencies. Additionally, leaders are urged to adopt people-centred styles, employees to embrace adaptability and organizational values, and training institutions to design continuous professional development programs that sustain long-term employee performance.

Keywords: Work Culture, Compensation Culture, Leadership Style, Employee Performance

1.1 Introduction

Generally, employees' performance is a pivotal determinant of how an organization's overall success, productivity, and long-term sustainability are perceived. It encompasses the efficiency and effectiveness with which individuals perform their assigned duties and responsibilities, directly impacting service delivery and organizational outcomes (Tubussum, Hashim, Javaid, & Marimuthu, 2025; Siregar & Indrawan, 2025). High employee performance leads to a more competitive and adaptable organization, as productive and engaged workers

are better equipped to navigate challenges and contribute to strategic goals. Furthermore, it is a key metric for evaluating the success of human resource management practices and organizational strategies. Beyond individual tasks, employee performance is also a reflection of the broader work environment. Research indicates that a positive work atmosphere and effective leadership are instrumental in boosting overall organizational success, which is a direct result of strong employee performance (Mokhchy, Chen, Ahmad, Khan, Zhang, & Ahmed, 2025). The pursuit of innovation, for example, which is crucial for modern businesses, is fundamentally tied to employee performance, specifically their innovative work behaviour and creative output (Yousaf et al., 2024). This highlights that employee performance is not merely a function of individual capability but is deeply interconnected with the organizational context.

Organizational culture, viewed as beliefs, shared values, and practices within a company, performs a fundamental function in shaping employee attitudes and behaviours. It acts as a guiding force that influences how employees interact with each other, approach their work, and respond to challenges (Siregar & Indrawan, 2025). A positive organizational culture can promote a sense of togetherness, commitment, and a sense of purpose among employees, leading to improved outcomes. For instance, studies have shown that organizational culture has a significant and positive impact on enterprise performance (Kareem et al., 2025) and organizational performance more broadly (Tubussum *et al.*, 2025).

The effect of organizational culture is so profound that it can either enhance or hinder an organization's ability to achieve its objectives. A culture that promotes cooperation and open knowledge-sharing, for example, it is a key driver of organizational performance (Mokhchy et al., 2025). Conversely, an organizational culture that tolerates negative behaviours like workplace incivility can negatively impact employee productivity and performance (Bijalwan, Gupta, Johri, & Asif, 2024). Therefore, cultivating and maintaining a robust organizational culture is a strategic imperative for any institution aiming to optimize its human capital. One specific aspect of organizational culture is the work culture. This encompasses the day-to-day practices, behaviours, and environment that define the workplace. A supportive and cooperative work culture, characterized by open communication and knowledge sharing, is essential for improving employee performance. Research has demonstrated that a conducive work environment can boost overall organizational performance by fostering higher collaboration and more effective execution of tasks (Mokhchy et al., 2025). Conversely, a toxic work environment, which might include aspects like workplace bullying, has a significant negative influence on employee productivity (Tubussum et al., 2025; Bijalwan et al., 2024).

Another key element of organizational culture is the compensation culture. This refers to the values and systems an organization uses to reward and recognize its employees, including salary, benefits, and incentives. While not extensively detailed in the provided literature, the

importance of this proxy is highlighted by research that advises organizations to provide incentives that can increase employee motivation, which in turn strengthens the positive impact of other variables on performance (Siregar & Indrawan, 2025). A compensation culture that is alleged to be fair and rewarding is therefore critical for driving employee motivation and performance.

In addition to culture, leadership style is a pivotal factor in shaping organizational outcomes. Leadership style refers to a leader's approach to influencing, motivating, and guiding their team members to achieve specific goals. Research has consistently shown that leadership style has a significant and direct effect on the performance of employees. For instance, a study by Siregar and Indrawan (2025) found that the leadership style implemented by managers at BPJS Employment had a significant influence on the employees' performance, highlighting the direct link between the way a leader behaves and the productivity of their subordinates.

1.2 Statement of the Problem

The performance of employees is considered an important factor in determining the effectiveness and success of any organization, especially within the public sector, which is tasked with delivering essential services to citizens (Siregar & Indrawan, 2025; Tubussum et al., 2025). In Nigeria, however, public service institutions have long been criticized for operational inefficiencies, low productivity, and a perceived lack of commitment to high-quality service delivery. This deficiency in employee performance is a critical challenge, as it directly impacts the government's ability to fulfill its mandates, erodes public trust, and hinders national development. Despite numerous reform efforts, the problem of sub-optimal employee performance persists, indicating that the root causes are not yet fully understood or effectively addressed (Okolie & Sule, 2024; Okechukwu, 2025).

A significant body of literature suggests that organizational culture is a vital element of employee performance. A culture that is strong and positive is expected to foster an environment where employees are motivated, engaged, and productive (Siregar & Indrawan, 2025; Mokhchy et al., 2025). However, a noticeable disparity exists in many Nigerian public service organizations where formal policies and stated values do not align with the actual day-to-day practices and outcomes. This creates a situation where organizational culture, despite its theoretical importance, does not consistently translate into the expected improvements in employee performance (Kareem et al., 2025; Tubussum et al., 2025). The problem, therefore, lies in the lack of a clear empirical understanding of how specific cultural elements influence performance within this unique public service context.

Specifically, the work culture within many public service institutions in North-Central Nigeria appears to be a major impediment to performance. These organizations often operate within a rigid, bureaucratic, and hierarchical framework that can discourage initiative,

innovation, and collaboration. The prevalent mindset may be more focused on procedural compliance than on service outcomes and efficiency (Bijalwan et al., 2024). This leads to a work environment where employees feel disempowered, their creative potential is stifled, and inter-departmental communication is poor. The problem is that the effect of this prevalent work culture on employee performance is not well documented, making it difficult to design targeted interventions to foster a more productive and dynamic workplace.

Furthermore, the compensation culture in the public service poses another significant problem. Employee motivation and performance are strongly tied to the perception of fairness and the structure of rewards. In many public sector organizations, the compensation system is often perceived as fixed, lacking in meritocratic principles, and not directly linked to performance or productivity. This lack of a performance-based reward system can demotivate employees and discourage them from exerting extra effort to achieve better results. The specific influence of this compensation culture on the performance of public servants in the North-Central Nigerian context remains largely unexplored, representing a critical gap in understanding how to effectively incentivise and improve service delivery.

The complexities of these relationships are further compounded by the role of leadership style. While organizational culture is a powerful force, it is largely established and maintained by the actions and behaviours of leaders (Siregar & Indrawan, 2025). A leader's style can either reinforce a positive, high-performance culture or perpetuate a dysfunctional one. However, existing research has not adequately addressed leadership style as a moderator of organizational culture and employee performance relationship. The problem is that without understanding this critical interaction, a reform strategy that focuses solely on changing culture without also addressing leadership practices is likely to be ineffective. This study is therefore necessary to clarify how a leader's style can strengthen or weaken the influence organizational culture has on employee performance.

In conclusion, a significant research problem exists in the public service of North-Central Nigeria, characterized by persistent sub-optimal employee performance. While organizational culture is recognized as a key factor, the specific influence of its proxies - work culture and compensation culture is not empirically understood in this context (Bijalwan et al., 2024; Siregar & Indrawan, 2025). More importantly, the crucial moderating role of leadership style, which can determine the effectiveness of cultural changes, has not been systematically investigated. The absence of empirical evidence on this complex, three-way relationship constitutes a major knowledge gap (Musa & Adeoye, 2025).

Previous empirical studies provide a strong foundation for the current research by exploring the link between organizational culture, leadership, and performance. For instance, Mokhchey, Chen, Ahmad, Khan, Zhang, & Ahmed (2025) in Pakistan's textile sector used the Structural Equation Model (SEM) to find that leadership practices and a cooperative organizational

culture affect organizational performance. Similarly, Tubussum, Hashim, Javaid, & Marimuthu (2025), using SEM-based analysis, found a significant effect of organizational culture on organizational performance among academic staff in Malaysian universities. These studies collectively establish the direct, significant effect of culture and leadership on organizational outcomes, underscoring the importance of these variables.

Etalong and Chikeleze (2023) employed multiple linear regression to organizational culture and employee performance nexus, revealing that organizational norms significantly strengthened employee commitment by promoting professional growth, recognition, clear communication of goals, and a supportive work environment. Additionally, a structured work routine enhanced productivity, time management, and u significantly predict performance, as the direct impact of culture on performance was stronger than the indirect effect.

In another study, Rachmad, Abubakar, Arief, Hartati, and Kristanti (2023) used VB-SEM to evaluate the effect of educational background and organizational culture on compensation and performance of employees in Islamic banks, showing that educational background had no effect, whereas organizational culture and compensation both significantly enhanced employee performance, with compensation reinforcing this relationship. Likewise, Haris, Jamaluddin, and Usman (2023) applied VB-SEM to analyse the influence of work culture, motivation, and competence on employee performance in the post-COVID-19 digital era, and their findings indicated that all three factors had significant impacts on the performance of employees in the digital context.

Beyond direct effects, the concept of a moderating role has been a key focus in recent research. Kareem, Aliyu, & Salimon (2025), utilizing Smart PLS SEM, discovered that Islamic work ethics significantly moderated the relationship between organizational culture and enterprise performance in Nigerian SMEs. In a related vein, the study by Tubussum et al. (2025) revealed a moderating effect, where organizational culture itself altered workplace bullying and organizational performance. These findings are crucial as they highlight that the relationship between key variables is not always direct but can be strengthened or weakened by a third variable, a concept central to the present study.

1.3 Aims and Objectives of the Study

The aim of the study is to examine the moderating effect of leadership style on the nexus between organizational culture and employee performance of public service in North-Central Nigeria. The specific objectives of the study are:

- i. To determine the effect of work culture on employees' performance of public service in North-Central Nigeria.
- ii. To examine the effect of compensation culture on employees' performance of public service in North-Central Nigeria.

- iii. To assess the moderating effect of leadership style on the relationship between organisational culture (work culture and compensation culture) and employees' performance of public service in North-Central Nigeria.

2.0 Literature Review and Theoretical Framework

2.1 Employee Performance

Employee performance is the bedrock of organizational success, representing how well people perform duty assigned to them. It includes not only the quality and quantity of work but also the efficiency, effectiveness, and behaviour demonstrated in the workplace. In changing business ecosystem, measuring employee performance has become increasingly complex, moving beyond simple output to include aspects like adaptability, collaboration, and innovation. High-performing employees drive productivity, foster a positive work environment, and contribute directly to an organization's competitive advantage and long-term viability. It is a critical metric for evaluating human resource management strategies and ensuring that an organization's most valuable asset - its people - are aligned with its strategic objectives.

According to Aguinis (2020), employee performance is a function of the collective results that employees achieve, encompassing their actions, behaviours, and the outcomes of their work. This perspective emphasizes that performance is not just about what is done, but also how it is done and the impact it has on the organization's goals. Griffin, Neal, and Parker (2020) define employee performance as the set of behaviours and actions that are relevant to the organization's goals. Their definition focuses on the behaviours that contribute to the overall effectiveness of the organization, highlighting the importance of actions over abstract qualities. A more quantitative definition by Campbell (2020) posits that employee performance is the measure of the outcomes and results of work, which are quantifiable and can be directly linked to specific job tasks. This approach is centred on tangible outputs and is particularly useful for roles where productivity can be easily tracked.

Schleicher, Venkataramani, and O'Leary (2021) view employee performance as a multidimensional construct that includes not only task-related behaviours but also contextual behaviours such as organizational citizenship and counterproductive work behaviours. This perspective offers a holistic view, acknowledging that performance goes beyond formal duties to include an employee's overall contribution to the work environment. For contemporary researchers like Sonnentag and Frese (2020), employee performance is a dynamic and evolving process influenced by an employee's motivation, cognitive abilities, and the work environment. This definition emphasizes that performance is not static but a continuous process that changes with individual development and external factors.

2.2 Organisational Culture

Organizational culture represents the shared values, beliefs, assumptions, and norms that govern how people behave within an organization. It is the social and psychological glue that holds an organization together, shaping the work environment, influencing employee attitudes, and guiding actions both formally and informally. A strong and positive organizational culture can align employees with strategic goals, foster a sense of identity and belonging, and ultimately drive superior performance. It acts as a powerful, yet often invisible, force that determines how employees communicate, collaborate, and respond to challenges, making it a critical variable in understanding and improving employee performance.

Schein (2017) describes organizational culture as a system of fundamental beliefs and assumptions developed by a group while addressing challenges of external adaptation and internal coordination. These shared assumptions are passed on to newcomers as the appropriate way to interpret situations, think, and behave, thereby shaping the organization's identity and influencing members' actions unconsciously. Organizational culture as a system of shared behavioural norms, values, and assumptions that shape the way employees interact with each other and with external stakeholders (O'Reilly, Chatman, & Caldwell, 1991). This definition emphasizes that culture is what employees actually do, not just what they say they believe, making it a system of observable behaviours that can be measured through surveys or direct observation.

Based on the review of current literature, the operational definition adopted for this study is: Organizational culture is a system of shared behavioural norms, values, and assumptions that shape the way employees within the public service interact with each other and with external stakeholders. This definition is particularly suited for this research as it allows for the measurement of culture through its two key proxies: work culture, which focuses on the day-to-day behavioural norms and a cooperative work environment, and compensation culture, which examines the specific values and practices surrounding employee rewards and recognition. By focusing on these tangible and observable dimensions, the study can effectively assess their influence on employee performance.

2.2.1 Dimensions of Organisational Culture

According to Haris, *et al.*, (2023), Etalong and Chikeleze (2023), Rachmad *et al.* (2023), Oskooee and Wooton (2020), and Shahzad *et al.*, (2013), organizational culture encompasses several key dimensions that shape employee behaviour and organizational effectiveness. These dimensions include work culture, which reflects employees' attitudes toward their tasks and responsibilities; compensation culture, which emphasizes fairness and motivation through reward systems; cultural strength, which denotes the degree of shared values and commitment within the organization; and communication culture, which highlights the openness, clarity, and flow of information across different levels of the organization.

Together, these elements form the foundation of an organization's culture and significantly influence overall performance and employee satisfaction.

Organizational culture is a multifaceted construct that is widely understood to comprise multiple interdependent dimensions rather than being a single, unified entity. Researchers often break down culture into distinct layers or components to better understand its complex nature and its influence on organizational outcomes. This multi-dimensional view acknowledges that culture is a system of values, beliefs, behaviours, and artifacts that collectively shape the work environment and guide employee actions (Yousaf et al., 2024). These dimensions work in concert, with the deeper, more ingrained layers influencing the more observable ones, thereby forming a cohesive cultural framework.

At its core, one of the most fundamental dimensions of organizational culture is shared values. These are the collective beliefs and principles that guide an organization's decisions and behaviours. For a culture to be strong, these values must be widely understood and embraced by employees. For example, a company that values innovation and knowledge-sharing will see these principles reflected in its daily operations and employee interactions (Mokhchy et al., 2025). The alignment of individual employee values with the organization's core values has been shown to be a key factor in improving performance and fostering a committed workforce (Siregar & Indrawan, 2025).

Beneath the layer of shared values lie the more deeply held beliefs and assumptions. These are often unconscious and dictate how employees interpret their surroundings and interact with their colleagues. These assumptions are formed over time as the organization solves internal and external problems. For instance, if an organization consistently rewards individual achievements over teamwork, employees will develop an unconscious belief that competition is more important than collaboration. This dimension is crucial in understanding aspects of culture that may not be immediately obvious, such as the prevalence of workplace bullying or incivility, which are often rooted in negative underlying beliefs about respect and professionalism (Bijalwan et al., 2024).

The most visible and tangible dimension of organizational culture is observable artifacts and behaviours. This includes everything from the physical layout of an office and the dress code to company rituals, ceremonies, and the language used in daily communication. These observable elements are the outward expression of the organization's deeper values and beliefs. For example, a public service organization with a hierarchical structure and formal communication channels visibly demonstrates a culture that values control and authority over flexibility and collaboration. These artifacts provide clues about the organization's true culture, which may differ from its espoused values.

2.3 Empirical Review

Mokhchy, *et al.* (2025) the study examined leadership practices, knowledge sharing, organizational culture and organizational performance through innovation. A quantitative research design was adopted, targeting 400 managers in Pakistan's textile industries, selected through purposive sampling. Data was analysed through SEM, a robust technique widely applied in social sciences. The findings revealed that effective leadership behaviour, supportive culture, and open knowledge-sharing practices significantly enhance innovation capability and consequently improve organizational performance.

Kareem, *et al.*, (2025) this research empirically investigated Islamic Work Ethics (IWEs), organizational culture and enterprise performance among SMEs. The population of 531 managers of SMEs. The results showed that organizational culture has a significant effect on enterprise performance, while IWEs also exert a strong positive influence on enterprise performance. Moreover, IWEs significantly moderated organizational culture and enterprise performance. The research concluded that higher adoption of IWEs strengthens the effect of organizational culture on enterprise performance.

Tubussum, *et al.*, (2025) investigated the influence of demographic characteristics on the relationship between organizational culture, workplace bullying, and organizational performance in Malaysian public universities. The quantitative design used a survey approach with data collected from 626 academic staff across 20 public universities. SEM was applied to test the hypotheses, and Partial Least Squares Multi-group Analysis (PLS-MGA) via Smart-PLS was employed to assess demographic variations. The findings revealed that workplace bullying had a significant negative impact, while organizational culture had a significant positive effect on organizational performance. Results further indicated demographic differences in the structural relationships, particularly based on years of experience, with organizational culture moderating the bullying-performance relationship more strongly for staff with over 20 years of experience.

Siregar, and Indrawan, (2025) analysed motivation, leadership style and organizational culture, and employee performance. A quantitative research design was used, with questionnaires distributed to employees of BPJS Employment at the Kisaran and Padang Sidempuan branches. Data were analysed using regression analysis and moderation testing. Findings showed that leadership style significantly influenced employee performance, and organizational culture enhanced productivity and loyalty. Employee motivation moderated the relationship, such that high motivation amplified the positive effects of leadership and culture on performance. The study suggested that BPJS should implement leadership training, strengthen positive work culture, and provide motivational incentives to enhance employee performance.

Yousaf, *et al.*, (2024) explored the interplay between innovative culture, innovative work behaviour, employee inventive performance (EIP), and emotional intelligence (EI) in Saudi Arabia. Using a conceptual and literature-based analytical design, the study examined how EI influences EIP and how IC supports innovation. Findings highlighted that EI strongly drives employee inventive performance, while innovative culture fosters idea generation and acceptance of innovation. The study concluded that organizations aiming to thrive in dynamic markets should nurture innovative cultures and leverage emotional intelligence to enhance creativity and competitiveness.

2.4 Theoretical frameworks

Theoretical frameworks are central to any rigorous research as they provide the lens through which variables are understood and relationships explained. For a study investigating the effect of organizational culture and leadership style on employee performance, Social Cognitive Theory (SCT) provides a suitable foundation. SCT extends beyond linear cause-and-effect relationships to explore the dynamic interplay between individuals' behaviours, their personal characteristics, and the surrounding social and physical environment - all of which are integral to the constructs under investigation.

Social Cognitive Theory was developed by Albert Bandura in the 1980s as an extension of his earlier Social Learning Theory (Bandura, 1986). At its core lies the concept of triadic reciprocal causation, which posits that human behaviour is shaped by continuous interactions among three determinants: behavioural factors (actions and responses), environmental factors (rules, norms, and organizational culture), and personal factors (beliefs, cognition, and self-efficacy). None of these determinants operates in isolation; rather, they exert mutual influence on one another, creating a holistic understanding of human functioning (Bandura, 1991).

In the context of this study, SCT directly supports the dependent variable - employee performance - which is understood as a behavioural outcome. Performance is not solely determined by an individual's skills but is also influenced by personal characteristics such as self-efficacy and by environmental enablers such as leadership and organizational culture. For instance, employees with high self-efficacy are more likely to exert effort and persevere in the face of challenges, particularly when supported by a positive and enabling work environment (Wood & Bandura, 1989).

In conclusion, Social Cognitive Theory is a perfect theoretical fit for this study, as it provides a comprehensive framework for understanding the complex relationships among the variables. It moves beyond a simple linear model to highlight the continuous, reciprocal interaction among personal cognitions, organizational culture, and employee behaviour. By using this theory, the study can not only confirm the relationship between culture, leadership, and performance but can also explain the underlying psychological and social processes

through which a leader's style can critically shape the environment and ultimately determine the success of cultural initiatives on employee performance in the Nigerian public sector.

3.0 Methodology

This research work adopts a combined survey and quantitative research design to examine the relationships between organizational culture, leadership style, and employee performance among public civil servants. The survey method enables the collection of diverse opinions, behaviours, and demographic characteristics from a representative sample, facilitating generalizability (Saunders et al., 2019; Creswell & Creswell, 2023). Quantitative analysis supports hypothesis testing and measurement of relationships through statistical techniques, ensuring objectivity and reliability (Cohen et al., 2023; Tabachnick & Fidell, 2021). Combining both designs provides a balance between breadth and precision, capturing complex perceptions while allowing rigorous statistical testing—an approach well-suited for evidence-based conclusions in the context of educational administration and public sector performance.

The study population consists of 3,512 civil servants employed in the Offices of the Head of Service across Niger, Nasarawa, and Kwara States in Nigeria's North-Central geopolitical zone. Using Taro Yamane's (1973) formula with a 95% confidence level and a 5% margin of error, a sample size of 359 respondents was determined. But to cushion the effect of no response rate, the study added 30% of the calculated sample size to arrive at a working sample size of 467. Systematic random sampling was employed to select participants, reducing bias and ensuring a representative cross-section of the population for valid and generalizable results (Trochim & Donnelly, 2016; Dillman et al., 2018).

Data was collected using a structured questionnaire using a 5-point Likert scale. Organizational culture (independent variable) was assessed through two determinants—work culture (adapted from Haris, Jamaluddin, & Usman, 2023; Etalong & Chikeleze, 2023), and compensation culture (adapted from Rachmad et al., 2023; Oskooee & Wooton, 2020; Shahzad et al., 2013), Employee performance (dependent variable) will be measured using items from Haris et al. (2023), Etalong & Chikeleze (2023), and Mohsen et al. (2020). Leadership style (moderating variable) will be evaluated using items adapted from Panjaitan et al. (2023). This carefully structured instrument ensures comprehensive coverage of the constructs, facilitates statistical analysis, and enhances the reliability of findings on how organizational culture and leadership style influence employee performance in Nigeria's public sector.

Table 3.2 Definition of Study Variable

Code	Variable Name	Variable Type	Definitions	Source
EP	Employee Performance	DV	This is the level to which employees effectively carry out their roles, achieve job-related goals, and contribute to organizational objectives.	Sonnentag & Frese (2002)
WC	Work Culture (WC)	IV proxy	Work culture refers to the beliefs, shared values, and practices within an organization that shape employees' attitudes, behaviours, and interactions at work.	Alharbi & Alyahya (2013)
CC	Compensation Culture	IV proxy	Compensation culture represents organizational norms and practices surrounding rewards, incentives, and benefits that motivate employees and influence work outcomes.	Ghosh (2012)
LS	Leadership Style	Moderating variable	Leadership style refers to the behavioural patterns and approaches leaders use in guiding, motivating, and managing employees to achieve organizational goals.	Northouse (2019)

The study employed PLS-SEM to analyse data, as this advanced statistical method is highly effective for exploring complex relationships between variables and validating theoretical frameworks. To test the research hypotheses, multiple regression analysis will be carried out at a 5% significance level, ensuring a thorough evaluation of the connections between the independent variables, the moderating variable, and the dependent variable. In this process, a $p\text{-value} > 0.05$ will suggest that the construct has no significant effect, resulting in the acceptance of the null hypothesis. Conversely, a $p\text{-value} < 0.05$ means rejection of the null hypothesis and acceptance of the alternative hypothesis, thereby confirming the proposed relationships within the study model.

To test the study's hypotheses, multiple linear regression analysis was conducted, adhering to a decision rule that mandates rejection of any null hypothesis if the $p\text{-value}$ is less than 0.05. The study regression model is stated below, adapted from Haris, et al. (2023):

$$EP = \beta_{0i} + \beta_1 WC_i + \beta_2 CC_i + \beta_3 LS_i + \beta_4 (WC_i \times LS_i) + \beta_5 (CC_i \times LS_i) + e_i$$

Where:

EP = Employee Performance; β_{0i} = constant; $\beta_1 WC_i$ = Work Culture coefficients (direct effect); $\beta_2 CC_i$ = Compensation Culture Coefficients (direct effect); $\beta_3 LS_i$ = Leadership Style coefficients (direct effect); $\beta_4 (WC_i \times LS_i)$ = Interaction term for Work Culture and Leadership Style (moderation effect); $\beta_5 (CC_i \times LS_i)$ = Interaction term for Compensation Culture and Leadership Style (moderation effect); e_i – error term

4.0 Result

Out of 467 copies of the questionnaire distributed, 405 copies were retrieved and found appropriate for data analysis.

Measurement (Outer) Model

Before conducting the evaluation of the study's structural model, the measurement model (also referred to as the outer model in PLS-SEM) was first assessed to establish the reliability and validity of the constructs and their corresponding indicators (Hair et al., 2017). The study consists of four key constructs: Work Culture (WC), Compensation Culture (CC), Leadership Style (LS), and Employee Performance (EP). Each construct was measured with five reflective items, as illustrated in Figure 1 (the SmartPLS path diagram). The assessment of the measurement model involved examining the factor loadings of all indicators to determine their contribution to their respective constructs. Factor loading indicates the strength of association between an observed indicator and its latent construct. In line with Fornell and Larcker (1981), items with factor loadings below the minimum acceptable threshold of 0.50 were deleted to ensure reliability and validity. The results indicated that while most items loaded satisfactorily above 0.50, a few items across the constructs fell below this threshold. Consequently, the following items were removed from the model: WC2, CC4, LS5, and EP3. The revised model retained the stronger indicators, thereby improving construct reliability and validity. Figure 1, the SmartPLS path diagram, shows the retained items and their respective loadings, reflecting these refinements to the measurement model.

Subsequent assessments of composite reliability (CR) and Average Variance Extracted (AVE) confirmed internal consistency reliability and convergent validity for all the constructs. This ensured that the refined model was robust enough to proceed with the evaluation of the structural relationships among the study variables.

Model Fit Indices

After running the CFA, the study assessed how the model fit the data. Table 1 displays the indices used to evaluate the study model fit.

	Saturated model	Estimated model
SRMR	0.094	0.094
d_ ULS	1.345	1.355
d_ G	0.543	0.543
Chi-square	1251.241	1253.501
NFI	0.644	0.643

The model fit assessment presented in Table 1 indicates that the measurement model demonstrates an acceptable but not optimal fit. The SRMR = 0.094 for both the saturated and estimated models is slightly above the recommended threshold of 0.08, suggesting a moderate fit between the observed and predicted correlations. The discrepancy measures, d_ ULS (1.345 vs. 1.355) and d_ G (0.543 for both models), show minimal differences between the saturated and estimated models, indicating model stability. The chi-square values (1251.241 for the saturated and 1253.501 for the estimated model) are relatively high, which is common in large-sample studies, and the Normed Fit Index (NFI) values of 0.644 and 0.643 are below the acceptable threshold of 0.90, reflecting a weak incremental fit. Overall, the results suggest that while the model is stable and adequately specified, improvements may be needed to achieve a better overall model fit.

Reliability and Convergent Validity Test

The result of the study's reliability and convergent validity test is presented in Table 2.

Table 2. Reliability and Convergent Validity Test

	Cronbach's alpha	Composite reliability	Average variance extracted (AVE)
CC	0.798	0.881	0.713
EP	0.801	0.864	0.561
LS	0.815	0.859	0.551
WC	0.724	0.829	0.555

The reliability and convergent validity test results presented in Table 2 indicate that all the study constructs meet the recommended thresholds for internal consistency and validity. The Cronbach's alpha (CA) values for CC (0.798), EP (0.801), LS (0.815), and WC (0.724) are all above the 0.70 benchmark, confirming satisfactory reliability. Similarly, the composite reliability (CR) values for CC (0.881), EP (0.864), LS (0.859), and WC (0.829) exceed the 0.70 threshold, further supporting internal consistency. In terms of convergent validity, the AVE values for CC (0.713), EP (0.561), LS (0.551), and WC (0.555) are all above the acceptable 0.50 level, indicating that each construct explains more than half of the variance of its indicators. These results, consistent with Fornell and Larcker's (1981) criteria, confirm that the constructs are both reliable and valid for further analysis.

Discriminant Validity – Fornell and Larcker Criteria

The result of Fornell and Larcker criterion is presented in table 3.

Table 3. Fornell and Larcker Criterion

	CC	EP	LS	WC
CC	0.844			
EP	0.679	0.749		
LS	0.012	0.136	0.743	
WC	0.401	0.445	0.245	0.745

The second assessment of the measurement model involved testing discriminant validity using the Fornell and Larcker criterion. This approach stipulates that the square root of the AVE for each construct must exceed its correlations with other constructs in the framework, ensuring that a construct is more strongly related to its own indicators than to those of others (Fornell & Larcker, 1981). As shown in Table 3, this requirement was met since the square roots of the AVE values for all constructs were greater than their inter-construct correlations. This finding indicates that the constructs are clearly distinguishable from one another, thereby establishing discriminant validity and confirming the strength of the measurement model.

Discriminant Validity - Heterotrait-Monotrait Ratio (HTMT) Criteria

The result of the HTMT criterion is presented in Table 4.

Table 4 HTMT Criteria

	CC	EP	LS	WC	LS x WC	LS x CC
CC						
EP	0.834					
LS	0.098	0.154				
WC	0.494	0.577	0.324			
LS x WC	0.143	0.197	0.331	0.340		
LS x CC	0.062	0.200	0.141	0.191	0.698	

The study also applied the HTMT to provide an additional evaluation of discriminant validity. According to Henseler et al. (2015), the HTMT criterion requires that the correlation values between constructs remain below the stricter benchmark of 0.85 or, alternatively, the more relaxed cutoff of 0.90. Meeting this condition signifies that the constructs are distinct and not overly interrelated. As presented in Table 4, all HTMT values were lower than 0.85, thereby confirming the presence of discriminant validity. This outcome further strengthens confidence in the measurement model and affirms that the constructs are adequately differentiated.

Evaluation of Structural (Inner) Model

Collinearity Problem

The result of the study collinearity test is presented in Table 5.

Table 5 Collinearity Test

	VIF
CC -> EP	1.211
LS -> EP	1.230
LS x CC -> EP	2.030
LS x WC -> EP	2.357
WC -> EP	1.318

After completing the measurement model assessment, the structural model was examined by checking for possible collinearity among the constructs. This was evaluated using the Variance Inflation Factor (VIF), where values exceeding 5 indicate potential multicollinearity concerns (Hair et al., 2019). As shown in Table 5, the VIF values ranged from 1.211 to 2.357, all well below the threshold. These findings demonstrate that multicollinearity does not pose a problem in this study, thereby supporting the robustness of the regression estimates and allowing the structural model analysis to proceed with confidence.

Coefficient of determination R^2

The R-square (R^2) value reflects the degree to which exogenous variables account for variations in the endogenous variable within a model. In other words, it represents the proportion of variance in the dependent construct that can be explained by the independent constructs. The interpretation of R^2 is typically guided by benchmark thresholds that serve as general guidelines. As noted by Chen, cited in Fauzi (2022), an R^2 of 0.19 indicates a weak effect, 0.33 reflects a moderate effect, and 0.67 demonstrates a strong effect. These benchmarks assist in evaluating the explanatory strength of the model, showing how effectively the exogenous variables clarify the variance in the endogenous variable. A higher R^2 value, therefore, indicates stronger explanatory power and a more reliable model.

Table 6 R-square value

	R-square	R-square adjusted
EP	0.506	0.500

The R-square (R^2) value measures the proportion of variance in the dependent variable that is explained by the independent variables in the model, thereby indicating the explanatory power of the exogenous variables on the endogenous construct. As suggested by Chen, cited in Fauzi (2022), R^2 values are interpreted using threshold levels where 0.19 is weak, 0.33 is moderate, and 0.67 is strong. Based on the results in Table 5, the R^2 value for employee performance (EP) is 0.506, with an adjusted R^2 of 0.500. This indicates that approximately 50% of the variance in employee performance is explained by the independent variables

(work culture, compensation culture, leadership style, and their interactions). The result reflects a moderate to substantial explanatory power of the model, demonstrating that the exogenous variables provide a meaningful contribution to predicting employee performance.

Predictive relevance Q^2 analysis

The Q^2 values were assessed to evaluate the predictive relevance of the study model for the endogenous constructs.

Table 7 **LV Prediction summary**

	Q^2predict	RMSE	MAE
EP	0.485	0.722	0.597

The Q^2 predict value of the model was further assessed using the LV prediction summary. As shown in Table 6, the Q^2 predict value for Employee Performance (EP) was 0.485, which is well above zero, indicating that the model has substantial predictive relevance (Hair et al., 2019). Additionally, the RMSE and MAE values were 0.722 and 0.597, respectively, suggesting that the model's prediction accuracy is acceptable and reliable. These results demonstrate that the model possesses strong predictive capability for the endogenous construct.

Test of Hypothesis

The bootstrapping results were employed to determine the significance of the hypothesized relationships in the study model.

Table 8: Path coefficient estimate

	Co-efficient	Standard Error (SE)	T statistics	P values
CC -> EP	0.610	0.053	11.500	0.000
LS -> EP	0.107	0.046	2.332	0.020
LS x CC -> EP	-0.038	0.085	0.445	0.657
LS x WC -> EP	0.065	0.058	1.120	0.263
WC -> EP	0.192	0.048	3.956	0.000

The results reveal that Workplace culture (WC) has a positive and significant effect on employee performance (EP), with a coefficient of 0.192, standard error of 0.048, t-statistic of 3.956, and a p-value of 0.000. The p-value being below 0.05 confirms the statistical significance of this relationship, showing that workplace culture plays a vital role in enhancing employee performance. Thus, the hypothesis that WC does not significantly influence EP is rejected.

The results reveal that compensation culture (CC) has a strong and positive effect on employee performance (EP), with a coefficient of 0.610, standard error of 0.053, t-statistic of 11.500, and a p-value of 0.000. Since the p-value is less than 0.05, this relationship is

statistically significant, confirming that a higher compensation culture leads to improved employee performance. Therefore, the hypothesis that CC does not significantly affect EP is rejected.

Leadership style (LS) also demonstrates a positive effect on employee performance (EP), with a coefficient of 0.107, standard error of 0.046, t-statistic of 2.332, and a p-value of 0.020. Because the p-value is below the 0.05 significance threshold, the relationship is statistically significant. This indicates that leadership style contributes positively to employee performance, though its effect is weaker than CC. Hence, the hypothesis that LS does not significantly influence EP is rejected.

The interaction between leadership style and compensation culture ($LS \times CC$) shows a negative and statistically non-significant effect on employee performance, with a coefficient of -0.038, t-statistic of 0.445, and a p-value of 0.657. Since the p-value is greater than 0.05, this suggests that leadership style does not moderate the relationship between compensation culture and employee performance. Consequently, the hypothesis proposing a non-significant moderating role of LS on the CC–EP relationship is not rejected.

Similarly, the interaction between leadership style and workplace culture ($LS \times WC$) indicates a positive but insignificant impact on employee performance, with a coefficient of 0.065, t-statistic of 1.120, and a p-value of 0.263. The p-value being greater than 0.05 shows that leadership style does not moderate the relationship between workplace culture and employee performance. Therefore, the hypothesis suggesting a non-significant moderation effect of LS on the WC–EP relationship is not rejected.

Discussion of Findings

The first hypothesis of the study proposed that workplace culture has no significant effect on employee performance in North-Central Nigeria. However, the findings reveal that workplace culture exerts a positive and significant influence on employee performance. This outcome underscores the importance of shared values, norms, and organizational practices in shaping employee behaviour and productivity. A strong workplace culture enhances collaboration, motivation, and commitment among employees, which in turn improves overall job performance. This result aligns with the findings of Oskooee and Wooton (2020) as well as Haris et al. (2023), who also observed that workplace culture serves as a critical determinant of employee outcomes in different organizational contexts.

The second hypothesis examined whether compensation culture significantly influences employee performance in North-Central Nigeria. The results demonstrate that compensation culture has a strong and positive impact on employee performance, suggesting that fair and competitive compensation structures motivate employees to put forth greater effort and remain committed to organizational goals. Compensation culture not only ensures financial

satisfaction but also promotes a sense of recognition and fairness among employees, thereby boosting productivity. This finding is consistent with previous studies, including those of Etalong and Chikeleze (2023), and Rachmad et al. (2023), which emphasized the critical role of compensation systems in enhancing employee morale and performance outcomes across diverse institutional settings. However, Oskooee and Wooton (2020) found an insignificant relationship between compensation culture and employee performance.

The third hypothesis tested the moderating effect of leadership style on the relationship between organizational culture (workplace and compensation culture) and employee performance in public service organizations in North-Central Nigeria. The results indicate that leadership style does not significantly moderate these relationships. Specifically, the interaction between leadership style and compensation culture ($LS \times CC$) revealed a negative and statistically insignificant effect, while the interaction between leadership style and workplace culture ($LS \times WC$) produced a positive but insignificant influence on employee performance. This implies that although leadership is important in organizational settings, its moderating role in this context was minimal, suggesting that culture and compensation exert stronger direct effects on performance than leadership styles do. This highlights the possibility that in the public service sector, structural and cultural factors may outweigh leadership influence in shaping performance outcomes.

Conclusion

Based on the findings, the paper concludes that organizational culture constructs play a significant role in shaping employee performance, with compensation culture (CC) and workplace culture (WC) demonstrating strong and significant positive effects on employee performance, thereby supporting their respective hypotheses. Leadership style (LS) also shows a positive and significant relationship with employee performance, further validating its hypothesized influence. However, the interaction effects of leadership style with both compensation culture ($LS \times CC$) and workplace culture ($LS \times WC$) are found to be insignificant, indicating that leadership style does not significantly moderate the relationships between these organisational culture factors and employee performance. Overall, the results highlight that while compensation culture, workplace culture, and leadership style independently enhance employee performance.

Recommendations

The research work from the forgoing analysis proffers the following recommendations:

- i. **Strengthen Workplace Culture:** Public service management should promote a positive workplace culture by enhancing transparency, collaboration, and employee involvement to sustain high performance.
- ii. **Enhance Compensation Practices:** Institutions should adopt fair and motivating compensation systems that recognize employee contributions and drive productivity.

- iii. **Develop Leadership Competence:** Policymakers should initiate leadership development programs to equip managers with leadership skills that directly improve employee performance.

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