VOL. 05 NO. 4,
AUGUST, 2024
E-ISSN 3026-9210
P-ISSN 3026-815X

African Scholar Publications & Research International
www.africanscholarpub.com

Journal of Built Env. & Geological Research (JBEGR)

Leadership Styles and Their Impact on Engineering Team Performance among Local Engineers in the Nigerian Construction Industry

Abidemi Ajayi
New Mexico State University, Las Cruces, New Mexico, United State of America.
Corresponding Author**:** *demijay@nmsu.edu*

Abstract
This study examines the influence of cultural diversity, resource limitations, leadership development, and organizational politics on leadership styles in the construction industry in Abuja, Nigeria. Through a survey of 150 respondents randomly selected from construction firms, this research investigates the impact of various factors on leadership approaches. The findings highlight the crucial connections between each factor and leadership styles, underscoring the importance of leaders adjusting their strategies based on these variables. Theoretical implications are examined by considering the Contingency Theory, which emphasizes the significance of adapting leadership approaches to match situational factors. This implies that successful leadership in this particular situation necessitates adaptability in handling various cultural backgrounds, limited resources, continuous development requirements, and organizational dynamics. The study emphasizes the importance of utilizing adaptive leadership strategies to navigate the complexities of the construction industry effectively. It also suggests that further research should be conducted to delve deeper into these dynamics in order to improve leadership practices in different sectors.

Keywords: Leadership Styles, Cultural Diversity, Resource Constraints, Leadership Development Programs, Organizational Politics

Introduction

Background

Studies on leadership and its styles show that leadership styles have a substantial influence on the result of projects, hence significantly affecting the performance of engineering teams, particularly in the Nigerian construction industry. Different studies have sought to examine the

relationship between various leadership styles and the achievement of teams in different sectors. Examples include Al Rahbi, Khalid, and Khan (2017) and Ekung, Olubajo, and Ebong (2015), who have presented research indicating that leadership styles significantly influence team motivation and qualities and the efficiency of delivering construction projects.

Various factors contribute to the challenges associated with leadership and the effectiveness of engineering teams in Nigeria. The diverse cultural backgrounds of team members may significantly influence their perception and response to different leadership styles (Okolie & Jovita, 2020). Furthermore, resource constraints are among the factors that force leaders to optimize team productivity under challenging conditions (Pretorius, Steyn, & Bond-Barnard, 2018). As evident from the study of Ogunjimi (2020), the industry lacks sufficient and well-structured leadership development programs, resulting in inconsistent execution of leadership initiatives; likewise, organizational politics and power dynamics may strongly influence leaders' decision-making processes and ability to manage teams (Kindarto, Zhu, & Gardner, 2020) effectively. These factors add to a complex ambiance where leadership styles must be carefully managed to ensure optimal team performance.

Despite the numerous factors identified to be contributing to performance issues among engineers in the construction industry as it pertains to leadership styles, four crucial factors are of significant interest in this investigation. These include the influence of cultural diversity, resource constraint, organizational politics, and power dynamics, as evidenced in the investigations made by Kindarto, Zhu, and Gardner (2020), Ogunjinmi (2020), Okolie and Jovita (2020), and Pretorius, Steyn, and Bond-Barnard (2017). According to these scholars, the identified factors play a significant role in the relationship between leadership and performance.

Therefore, to improve project results or outcomes in developing countries like Nigeria, known for its diverse cultural background and resource constraints, it is crucial to address leadership issues paramount to the construction. This study seeks to examine the influence of cultural diversity, resource constraints, leadership development, and organizational politics on leadership styles and team success in order to fill this gap in knowledge. The study findings will provide specific recommendations for enhancing leadership methods, ultimately resulting in improved project execution and overall performance in the industry (Kaneza, 2024; Subramanian & Banihashemi, 2024).

Review of relevant literature

Overview of Leadership Styles in the Construction Industry

Leadership styles in the construction business have a considerable influence on the success of projects, employee motivation, and team performance. These leadership styles have been the subject of several studies, which have underlined their

effectiveness in steering teams toward the fulfilment of project goals. Gaviria-Rivera and López-Zapata (2019) and Jaroliya and Gyanchandani (2022) have stressed the crucial significance of transformational leadership in the growth of a healthy organizational environment and the increase of work satisfaction. Veliu et al. (2017) and Huertas-Valdivia et al. (2019) have recognized this leadership style as especially helpful in high-pressure circumstances since it encourages and inspires people to transcend their average performance. Consequently, it is vital to appreciate the effect of leadership styles on team dynamics and operational outcomes in order to increase construction sector performance.

Conversely, transactional and laissez-faire leadership approaches have exhibited contradictory results. For example, transactional leadership, which stresses separate structures, incentives, and penalties, may be successful in attaining short-term results; nevertheless, it typically fails to create long-term drive and creativity (Anderson & Sun, 2017; Kindarto et al., 2020). Conversely, laissez-faire leadership, which gives decision-making to staff and offers limited monitoring, may result in lower productivity and a lack of direction (Sousa & Rocha, 2019). These results indicate that, although various leadership styles may prove advantageous in particular circumstances, their implementation necessitates meticulous consideration, particularly in dynamic and intricate environments such as construction (Pretorius et al., 2018; Subramanian & Banihashemi, 2024).

It is crucial to appreciate the influence of organizational politics, resource limits, cultural diversity, and power dynamics on the efficacy of leadership in the construction sector as we reach the end of this topic. Cultural diversity may give a team a range of viewpoints. However, leaders also need to be culturally aware and flexible in their use of varied communication methods (Akinosho et al., 2020). In many circumstances, resource restrictions compel leaders to make tough choices, which needs a careful balance between team morale and effectiveness (Ekung et al., 2015). company politics may muddle decision-making processes, mandating that leaders manage power conflicts and integrate team goals with broader company objectives (Kindarto et al., 2020).

In contrast, power dynamics are a crucial element in the impression of leadership. These factors might either boost or damage a leader's authority, depending upon their management. Therefore, in order to ensure that teams stay cohesive and dedicated to project success, effective leadership in construction must adeptly handle these elements.

Relationship between cultural diversity and leadership styles

The relationship between cultural diversity and leadership styles is a crucial topic of research, notably in how leaders manage teams with various cultural origins. Cultural

diversity may offer distinct problems and possibilities in leadership, requiring leaders to modify their methods to fit the demands of a multicultural workforce. Research by Anderson and Sun (2017) demonstrates that transformational leadership, which stresses inspiration and customized attention, is typically successful in culturally diverse situations. This method encourages tolerance and respect for other opinions, leading to better team cohesiveness and motivation (Gaviria-Rivera & López-Zapata, 2019; Huertas-Valdivia et al., 2019). Conversely, leadership styles that are inflexible or highly transactional may fail to relate with diverse teams, possibly leading to misunderstandings and poor performance (Sousa & Rocha, 2019; Veliu et al., 2017).
Furthermore, scientific research reveals that cultural diversity among teams might impact the success of different leadership styles. Leaders who effectively negotiate cultural differences frequently display flexibility and cultural intelligence, integrating their leadership style with the cultural expectations of their team members (Al Rahbi et al., 2017; Kindarto et al., 2020). Adaptability is crucial in the construction sector, mainly when teams include personnel from many cultural backgrounds. In such cases, leaders must effectively manage the project's requirements while also respecting cultural conventions (Akinosho et al., 2020). Hence, it is crucial to comprehend and incorporate cultural diversity into leadership strategies in order to cultivate an efficient and cohesive work atmosphere, eventually resulting in enhanced team performance and project success (Ekung et al., 2015; Subramanian & Banihashemi, 2024). Given this, we propose the first hypothesis (H1), which is that a significant relationship exists between cultural diversity and leadership styles.

Relationship between resource constraints and leadership styles

In many sectors, especially engineering and construction, the link between resource limitations and leadership philosophies is crucial to understanding how successful a leader may be. Leaders are often under a great deal of pressure to maximize their tactics and decision-making procedures due to resource limitations, which include limited time, money, and resources. According to studies, transactional leadership works better in these kinds of situations because it emphasizes efficiency, incentive structures, and well-defined objectives (Anderson & Sun, 2017; Pretorius et al., 2018). Despite these obstacles, this leadership style enables leaders to stay in charge and guarantee that projects are finished on schedule and under budget. While transactional leadership might lead to success in the short term, it could not adequately meet the team's long-term motivational demands, which are essential for continued performance (Veliu et al., 2017; Gaviria-Rivera & López-Zapata, 2019).
On the other hand, transformational leadership, which places a strong emphasis on inspiring and motivating people, has clear benefits but may be more challenging to use successfully when resources are limited. By fostering creativity and adaptation within

their teams, leaders who embrace this approach may help their teams come up with innovative solutions to problems that arise from limited resources (Sousa & Rocha, 2019; Kaneza, 2024). However, the capacity of the leader to strike a balance between inspiration and pragmatic concerns, including fulfilling deadlines and maintaining under budget, is crucial for the effectiveness of transformational leadership in the face of resource restrictions (Al Rahbi et al., 2017; Akinosho et al., 2020). Therefore, although several leadership philosophies may be used when resources are limited, their efficacy depends on the leader's capacity to adjust and react to the unique problems these limits provide. Hence, we propose the second hypothesis by stating a significant relationship between resource constraints and leadership style.

Relationship between leadership development and leadership styles

Research has shown that programs for developing leaders have a significant impact on the uptake and improvement of different leadership philosophies. For instance, one of the main results of well-structured leadership development projects is often transformational leadership, which focuses on inspiring and motivating colleagues. Studies conducted by Al Rahbi et al. (2017) demonstrate how these initiatives support leaders in developing the abilities required to inspire and engage their teams, which enhances productivity. In a similar vein, Huertas-Valdivia et al. (2019) stress that, especially in fast-paced sectors like hospitality and construction, leaders must constantly evolve their leadership styles in order to meet changing organizational demands. It emphasizes the need for continual training and self-improvement initiatives since leaders' capacity to switch between various leadership philosophies, such as transformational and transactional leadership, often relies on the breadth and calibre of their growth experiences.

Furthermore, conceptual frameworks imply that a leader's effectiveness is directly related to the particular environment in which they function and that improving a leader's capacity for style adaptation may be achieved via leadership development. According to Anderson and Sun (2017), instead of being limited to a particular strategy, leadership development programs should strive to produce leaders who can use a wide variety of approaches. This flexibility is essential because it enables leaders to react to opportunities and problems inside their businesses efficiently. Veliu et al. (2017) provide more support for this viewpoint, stating that leadership development is essential for providing leaders with the skills they need to apply a variety of leadership philosophies, which enhances team productivity and work satisfaction. Thus, developing leaders' repertory and refining their current styles are just as crucial to leadership development as giving them the tools they need to be more successful and flexible in a complex organizational setting. In view of the reviewed literary evidence, we proposed the third hypothesis (H_3), which is that a significant relationship exists

between leadership development and leadership styles among local engineers in the Nigerian construction industry.

Relationship between organizational politics and leadership styles

Given the consequences for organizational performance and employee morale, research into the link between organizational politics and leadership styles is crucial. Leadership styles have a substantial impact on how leaders negotiate and manage organizational politics, which are the behaviours and actions that people participate in to acquire power and advantage inside an organization. For example, transformational leaders develop openness and trust, which reduces the adverse effects of organizational politics (Gaviria-Rivera & López-Zapata, 2019; Sousa & Rocha, 2019). Transactional leadership styles, on the other hand, may worsen organizational politics by emphasizing reward-based systems, which may foster employee competitiveness and power conflicts (Veliu et al., 2017; Al Rahbi et al., 2017).

According to empirical research, leadership styles have a direct impact on how workers perceive and handle organizational politics. For example, Anderson and Sun (2017) found that leaders who use a more authoritarian or authoritative style may unintentionally increase political conduct inside their teams, as workers may feel compelled to participate in political manoeuvring to protect their jobs or acquire favour. Leaders who adopt participative or democratic styles, on the other hand, can mitigate the adverse effects of organizational politics by involving employees in decision-making processes, reducing the perceived need for political behaviour (Kindarto, Zhu, and Gardner, 2020; Huertas-Valdivia et al., 2019). Thus, the confluence of leadership styles and organizational politics emphasizes the significance of choosing and fostering leadership methods that encourage justice and cooperation, resulting in a more peaceful and productive workplace. Therefore, we propose the fourth hypothesis (H_4), which is that such organizational politics significantly influence leadership styles among local engineers in the construction industry in Nigeria.

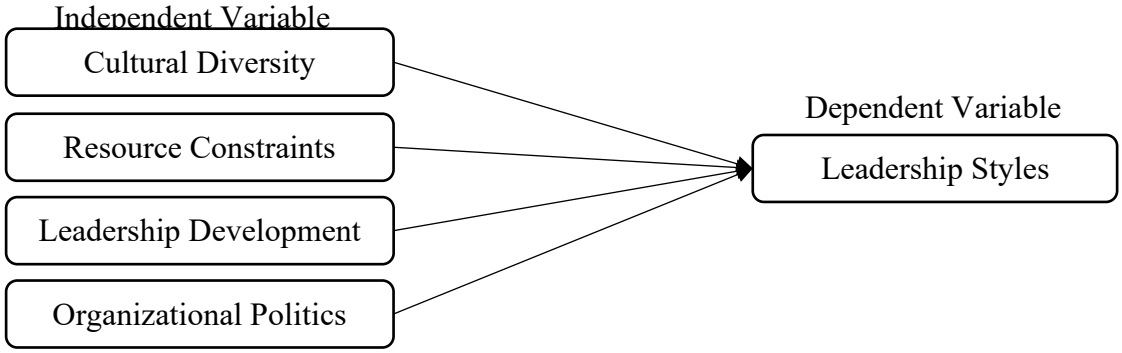


Figure 1: Research Framework

Theoretical Underpinning

The Contingency Theory of Leadership is an essential paradigm for understanding how different contextual circumstances influence leadership styles, such as cultural diversity, resource limits, leadership development, and organizational politics. According to Fiedler's Contingency Theory, a leader's performance is decided not by their intrinsic characteristics but by how well their leadership style fits with situational needs (Fiedler, 2015; Peters et al., 1985). For example, in culturally diverse businesses, leaders may need to adjust their leadership styles to fit various cultural norms and values, which may have an impact on team relationships and performance (Shala et al., 2021). Similarly, in resource-constrained contexts, leaders may adopt more directive or task-oriented approaches to maximize limited resources, assuring efficient operation while encouraging leadership growth in their teams (Kerr et al., 1974; Veliu et al., 2017).

Furthermore, organizational politics influences leadership styles since leaders must manage power dynamics and competing interests inside the company. According to the Contingency Theory, in politically charged situations, leaders may need to use both transformational and transactional leadership styles to successfully manage relationships and accomplish corporate objectives (Yukl, 2011; Anderson & Sun, 2017). This theory emphasizes that there is no one-size-fits-all approach to leadership; instead, leaders must constantly assess their organizational environment and adjust their leadership styles to meet the unique challenges posed by cultural diversity, resource constraints, and internal politics (Hughes et al., 1998; Huertas-Valdivia et al., 2019). As a result, the Contingency Theory of Leadership offers a thorough explanation of how many situational elements interact to impact leadership effectiveness, highlighting the significance of flexibility and adaptation in leadership practice.

Methodology

We employ a quantitative research approach where sets of predesigned questionnaires were distributed to identified target respondents in the construction industry in Nigeria. The survey includes the leaders and the employees. The predesigned questionnaires were manually distributed to these respondents, and it took us over three months to retrieve a sizable number of responses from the target audience. We use the G*power analysis software to estimate the needed sample size. The G*power suggest a sample size of 129. However, we retrieved 200 responses, 150 of which were found to be valid, and they were used in the data analysis. Items measuring each construct were adapted from earlier investigations and were measured using a 5-point Likert scale.

We ensured that the adapted items were pretested by two (2) professors and two (2) industry experts who satisfied the item's wording, grammar, mechanical accuracy and

other validity requirements. In total, thirty-four items were used in measuring all the constructs under investigation in the following order: six (6) measure resource constraints, and seven (7) measure leadership styles, cultural diversity, leadership development programs and organizational politics, respectively.

Analysis Findings and Discussions

Table 1: Items' Reliability

S/N	Construct	Number of Items	Cronbach Alpha (α)
1	Leadership Style	7	0.886
2	Cultural Diversity	7	0.907
3	Resource Constraint	6	0.897
4	Leadership Development	7	0.914
5	Organizational Politics	7	0.913

According to Flake, Davidson, Wong and Pek (2022), the item reliability of the instrument used is critical to ensure the replicability of such an investigation. Given this, Cronbach alpha value greater than 0.7 and less than 0.95 is given as the accepted threshold. In this investigation, we observed the reliability rules by assessing the Cronbach alpha, and the alpha values observed range from 0.886 to 0.913, signifying that the items used in this investigation are reliable.

Table 2: Respondents' Demographics

S/N		Construct	Sample (n)	Frequency
1	Gender	Female	31	20.70
		Male	119	79.30
2	Age group	21 - 30	20	13.30
		31 - 40	35	23.30
		41 - 50	73	48.70
		Above 51	22	14.70
3	Relationship Status	Single	40	26.70
		Married	84	56.00
		Divorced	26	17.30
4	Number of Years in Industry	0 - 5	57	38.0%
		6 - 10	49	32.7%
		above 10 years	44	29.3%

Before we proceed to analyze the collected data and confirm the posited hypotheses, we will examine the data demographics. The purpose of the data demographic analysis is to allow the researcher and the reader to see the data characteristics. We employ the

frequency analysis to fulfil this observation. The frequency result shows that most of the respondents who responded to this survey were male engineers and employees working in the construction industry in Nigeria, 119 (79.30%), followed by the female respondents, 31(20.70)% respectively. This shows that the construction industry among local engineers is male-dominated.

Similarly, the result on the age group reveals that most of the respondents were 41 – 50 years, followed by the age group 31 – 40, then above 51, and the minor group represented are those respondents between the ages of 21 – 30 having 73 (48.70%), 35 (23.30%), 22 (14.70%) and 20 (13.30%). These statistics reveal that the respondents investigated in the local construction industry in Abuja, Nigeria, are mature enough to understand the industry dynamics; hence, they are proven valid enough to answer the survey.

Furthermore, we seek to understand the respondents' relationship status. The analyzed data reveals that most of the respondents were married, followed by single and divorced, with 84(56%), 40(26.70%) and 26(17.30%). The result in this regard reveals that although most of the respondents were married, nevertheless, single and divorce rate among the respondents are high in the industry.

Lastly, we examine the number of years spent in the industry. The analyzed data shows that most of the respondents have spent between five years or less, followed by those who have spent 6 – 10 years and those with over ten years of experience in the industry, having 57(38.0%), 49(32.70%) and 44(29.30%) respectively. The findings reveal some turbulence or intricacies going on in the industry that are making people opt out, confirming the leadership issues addressed in this investigation.

Table 3: Analysis Findings (Multiple Linear Regression)

Hypothesis	Relationship	β	STD	T stat	P values
H_1	Cultural Diversity -> Leadership Style	.331	.053	6.265	.000
H_2	Resource Constraints -> Leadership Style	.183	.063	2.929	.004
H_3	Leadership Development -> Leadership Style	.203	.062	3.291	.001
H_4	Organizational Politics -> Leadership Style	.187	.061	3.053	.002
r	.474				
r^2	.463				
F	9.863				.<001
n	150				
df	4(149)				

We use SPSS version 27 to conduct a multiple regression analysis using 150 valid samples collected from local engineers to observe their views on the investigated relationships. We start with the variance explained *in r^2; the value is observed to be 0.*463. This implies that the variables under investigation, namely cultural diversity,

resource constraints, leadership development, and organizational politics, explain a 46.3% variance in the leadership styles employed by team leaders in the construction industry. The overall model was found to be significant, having a p-value of <0.001.

The first hypothesis (H_1) in this investigation posits a significant relationship between cultural diversity and leadership styles. The observed result in this regard affirms the position, having cultural = ($\beta = 0.331$, T = 6.265) $p < 0.05$. The finding shows that employees from diverse cultures occupy the construction industry. Hence, team leaders must be flexible, responsive, and adaptive in their leadership approach, tailoring their leadership style to cater to, leverage, and manage culturally diverse groups effectively to foster an inclusive environment. The finding in this regard was found to align with earlier investigations not limited to Anderson and Sun (2017), Gaviria-Rivera & López-Zapata (2019), and Huertas-Valdivia et al. (2019), who stress the ability of team leaders on team cohesion, inclusiveness and motivation to achieve team goals effectively. Therefore, we accept the first hypothesis.

Similarly, a significant relationship was found between resource constraints and leadership styles having resource constraint = ($\beta = 0.183$, T = 2.929) $p < 0.05$. The finding in this regard shows that limited resources to execute significant projects warrant team leaders' need for a strategic and adaptive leadership approach in prioritizing tasks and making difficult decisions using an innovative approach to manage teams under any unfavourable conditions. The finding conforms with Anderson and Sun (2017), Pretorius et al. (2018), Veliu et al. (2017), and Gaviria-Rivera and López-Zapata (2019). Hence, the ability to adjust leadership styles in response to limited resources is crucial in sustaining team performance and achieving the intended objectives despite the challenges faced (Al Rahbi et al., 2017; Akinosho et al., 2020; Sousa & Rocha, 2019; Kaneza, 2024).

Furthermore, we established a significant relationship between leadership development and leadership styles (H_3), having leadership development = ($\beta = 0.203$, T = 3.291) $p < 0.05$. The findings show that investing in leadership development programs has a significant influence on leadership styles in the sense that the leadership development programs will enable the team leaders to refine their skills and adapt effortlessly and effectively to solve complex leadership issues. The analysis result was found to be in tandem with earlier investigations not limited to Al Rahbi et al. (2017), Anderson and Sun (2017), and Veliu et al. (2017) where they agree that leadership development programs equip leaders with a variety of skills, approaches and flexibility essential for the leader to seize the available market opportunities, and tackle issues in efficient and effective manners to improve the team and firm performances. On this note, we accept the third hypothesis (H_3).

Lastly, pertaining to the fourth hypothesis (H_4), the analysis result affirmed the significant relationship between organizational politics and leadership style having

organizational politics = (β = 0.187, T = 3.053) $p < 0.05$. The finding shows that leaders who operate in a politically charged environment are prone to adopt several leadership styles if they need to achieve a functional and sustainable team performance free from bottlenecks and challenges posed by organizational politics. The hypothesis finding, therefore, corresponds to that of earlier investigations where it was concluded that leaders needed to adapt to several innovative leadership styles so as to be able to effectively and efficiently manage functional and dysfunctional political dynamics within organizations to ensure optimum performance for team and the organization at large (Gaviria-Rivera & López-Zapata, 2019; Sousa & Rocha, 2019; Veliu et al., 2017; Al Rahbi et al., 2017). Given this, the fourth hypothesis was accepted.

Practical Implications of Findings

The results, when applied to the Nigerian construction sector, highlight the need for leadership flexibility and inclusion in efficiently managing culturally diverse teams. Given the sector's regular resource restrictions, executives must use strategic and creative techniques to overcome obstacles and maintain success. Investing in leadership development programs is critical because they improve leaders' ability to handle complicated situations and adjust their approaches to changing demands. Furthermore, leaders must be skilled at negotiating organizational politics, using a variety of leadership styles to manage political dynamics and assure peak team performance. Addressing these elements would considerably improve leadership effectiveness, as well as the success and resilience of Nigerian building projects.

Theoretical Implications of Findings

The results of this research, examined using the Contingency Theory of Leadership, provide significant theoretical knowledge for the Nigerian construction sector. Contingency Theory posits that the efficacy of leadership is impacted by several situational conditions, which correspond with the findings of this study. The correlations shown between cultural diversity, resource limitations, leadership training, organizational politics, and leadership approaches demonstrate that successful leadership cannot be universally applied but must be tailored to individual conditions.

The results suggest that leaders in Nigeria's construction industry should adapt their leadership styles to accommodate varied cultural backgrounds, effectively manage limited resources, handle continuous leadership development, and negotiate organizational politics. Leaders must possess adaptability in order to successfully manage teams with diverse cultural viewpoints, plan efficiently when faced with limited resources, increase their abilities to address complex situations and adjust their leadership style to align with the political dynamics inside their businesses. These

findings validate the notion of Contingency Theory, which states that the efficacy of leadership is contingent upon aligning leadership styles with the specific situational challenges encountered by leaders in their respective professions.

Limitations and Recommendations for Future Works

The research is subject to many constraints that may impact the generalizability and application of its results. Firstly, the study is focused only on the Nigerian construction sector, which may restrict the generalizability of the findings to other industries or areas. The study's context-specific nature implies that doing identical research in other geographical locations or industries might provide divergent outcomes. Moreover, the research is dependent on data provided by leaders and workers themselves, which may create biases and impact the precision of the results. Future studies would be enhanced by integrating other data sources, such as objective performance measures and third-party reviews, to provide a more holistic perspective on leadership effectiveness.

In addition, the study identifies meaningful connections between leadership styles and factors such as cultural diversity, resource constraints, leadership development, and organizational politics. However, it does not investigate the specific ways in which these factors impact leadership styles. Subsequent research should explore the fundamental processes involved and use longitudinal methods to gain insight into the development of these interactions across time. By broadening the scope of the study to include many sectors and using a combination of different research methodologies, we may get more comprehensive insights and strengthen the reliability of the results. Furthermore, analyzing the effects of diverse leadership styles on organizational results in different situations will provide significant insights for both professionals and scholars in this subject.

Conclusion

Overall, this research highlights the crucial connections among cultural diversity, limited resources, the development of leadership skills, organizational politics, and leadership styles in the Nigerian construction sector. The results suggest that leaders need to demonstrate adaptability and flexibility in order to successfully oversee different teams, handle limited resources, participate in ongoing leadership training, and tackle the intricacies of organizational politics. These discoveries not only confirm the use of contingency theory to explain how different situational elements affect leadership styles but also highlight the need for more study in many sectors and situations. Future research may provide more detailed insights and practical advice for leaders seeking to improve organizational performance and team dynamics by examining the limits of this study and investigating the underlying processes of these interactions.

References

Akinosho, T. D., Oyedele, L. O., Bilal, M., Ajayi, A. O., Delgado, M. D., Akinade, O. O., & Ahmed, A. A. (2020). Deep learning in the construction industry: A review of present status and future innovations. *Journal of Building Engineering, 32*, 101827.

Al Rahbi, D., Khalid, K., & Khan, M. (2017). The effects of leadership styles on team motivation. *Academy of Strategic Management Journal*, 16(2), 1-14.

Anderson, M. H., & Sun, P. Y. (2017). Reviewing leadership styles: Overlaps and the need for a new 'full-range' theory. *International Journal of Management Reviews, 19*(1), 76-96.

Ekung, S., Olubajo, O. O., & Ebong, U. (2015). Influence of leadership traits on team performance as correlates of success in construction project delivery.

Fiedler, F. R. E. D. (2015). Contingency theory of leadership. In *Organizational Behavior 1* (pp. 232-255). Routledge.

Flake, J. K., Davidson, I. J., Wong, O., & Pek, J. (2022). Construct validity and the validity of replication studies: A systematic review. *American Psychologist*, *77*(4), 576.

Gaviria-Rivera, J. I., & López-Zapata, E. (2019). Transformational leadership, organizational climate and job satisfaction in work teams.

Huertas-Valdivia, I., Gallego-Burín, A. R., & Lloréns-Montes, F. J. (2019). Effects of different leadership styles on hospitality workers. *Tourism Management, 71*, 402-420.

Hughes, R. L., Ginnett, R. C., & Curphy, G. J. (1998). Contingency theories of leadership. In *Leading Organizations: Perspectives for a New Era* (pp. 141-157).

Jaroliya, D., & Gyanchandani, R. (2022). Transformational leadership style: A boost or hindrance to team performance in IT sector. *Vilakshan-XIMB Journal of Management, 19*(1), 87-105.

Kaneza, J. (2024). Influence of leadership styles on project team performance in Rwanda. *International Journal of Project Management, 6*(1), 64-75.

Kerr, S., Schriesheim, C. A., Murphy, C. J., & Stogdill, R. M. (1974). Toward a contingency theory of leadership based upon the consideration and initiating structure literature. *Organizational Behavior and Human Performance, 12*(1), 62-82.

Kindarto, A., Zhu, Y. Q., & Gardner, D. G. (2020). Full range leadership styles and government IT team performance: The critical roles of follower and team competence. *Public Performance & Management Review*, 43(4), 889-917.

Kindarto, A., Zhu, Y. Q., & Gardner, D. G. (2020). Full range leadership styles and government IT team performance: The critical roles of follower and team competence. *Public Performance & Management Review, 43*(4), 889-917.

Ogunjinmi, V. B. (2020). Leadership style and engineering research and development performance (Doctoral dissertation, University of the Southwest).

Okolie, K. C., & Jovita, E. C. Influence of leadership approach on performance of building construction industries in South-East of Nigeria.

Peters, L. H., Hartke, D. D., & Pohlmann, J. T. (1985). Fiedler's Contingency Theory of Leadership: An application of the meta-analysis procedures of Schmidt and Hunter. *Psychological Bulletin, 97*(2), 274.

Pretorius, S., Steyn, H., & Bond-Barnard, T. J. (2017). Exploring project-related factors that influence leadership styles and their effect on project performance: A conceptual framework. *South African Journal of Industrial Engineering, 28*(4), 95-108.

Pretorius, S., Steyn, H., & Bond-Barnard, T. J. (2018). Leadership styles in projects: Current trends and future opportunities. *South African Journal of Industrial Engineering, 29*(3), 161-172.

Shala, B., Prebreza, A., & Ramosaj, B. (2021). The contingency theory of management as a factor of acknowledging the leaders-managers of our time study case: The practice of the contingency theory in the company Avrios. *Open Access Library Journal, 8*(9), 1-20.

Sousa, M. J., & Rocha, Á. (2019). Leadership styles and skills developed through game-based learning. *Journal of Business Research, 94*, 360-366.

Subramanian, S. N., & Banihashemi, S. (2024). Towards modern leadership styles in the context of the engineering sector. *Project Leadership and Society*, 100133.

Veliu, L., Manxhari, M., Demiri, V., & Jahaj, L. (2017). The influence of leadership styles on employee's performance. *Management, 31*(2).

Veliu, L., Manxhari, M., Demiri, V., & Jahaj, L. (2017). The influence of leadership styles on employee's performance. *Management, 31*(2).

Yukl, G. (2011). Contingency theories of effective leadership. In *The SAGE Handbook of Leadership* (pp. 286-298).