

Leader Technical Skills and Performance of State Agencies in Kenya.

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ABSTRACT

This study investigated the relationship between leader technical skills and the performance of state agencies in Kenya, with a specific focus on the moderating effect of board composition. The research employed a mixed-method design with a post-positivist approach, targeting 135 state agencies in Kenya, from which a sample size of 100 was selected. Data was gathered using semi-structured questionnaires and secondary data from public annual reports. The findings indicate a significant positive relationship between a leader's technical skills and agency performance. Leader technical skills, which are defined as the practical knowledge and competencies required to manage bureaucratic systems and implement policies, were found to account for 33.6% of the variance in the performance of state agencies. The regression analysis confirmed that an increase in a leader's technical proficiency directly correlates with improved agency performance. The study's most significant finding is that board composition acts as a key moderating variable. When board composition was added to the statistical model, the explained variance in agency performance increased to 56.8%. This suggests that the effect of a leader's technical skills is amplified by a board's expertise, diversity, and independence. The conclusion drawn from this is that high performance in Kenyan state agencies is the result of a synergistic relationship between a technically skilled leader and a well-composed, competent board that provides strategic oversight and an ethical framework. Recommendations for policymakers include a dual focus on recruiting and training leaders with technical skills and reforming board appointment processes to ensure expertise, independence, and diversity.

Keywords: Leader technical skills, Board Composition, Performance of State agencies in Kenya

APA CITATION

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1.0 INTRODUCTION

1.1 Background of the Study

The effective governance and performance of public institutions are critical for national development, particularly in emerging economies. In Kenya, state agencies are entrusted with delivering essential public services and implementing government policy. The capacity of these agencies to fulfil their mandates is inextricably linked to the quality of their leadership. A growing body of literature underscores the multifaceted nature of leadership and its impact on organizational outcomes, yet a significant gap remains in understanding the specific role of leader technical skills as a predictor of performance within this unique context.

Leader technical skills are defined as the specialized knowledge, expertise, and experiential prowess that a leader uses to guide and direct an organization. These skills are a crucial source of influence, providing the

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ethical foundation and competence necessary to inspire follower trust and commitment (González & Guillén, 2018). Within state agencies, these skills are operationalized through a leader's ability to set clear organizational goals and objectives, establish formalized organizational routines, and enhance decision-making systems. The establishment of specific goals and objectives, for example, is empirically linked to positive employee outcomes, including heightened commitment to organizational aims (Bipp & Kleingeld, 2017). Similarly, the creation of formalized routines promotes organizational harmony and consistency, acting as a critical reference point for control and duplication of activities (Weichbrodt & Grote, 2019). These technical competencies provide the structural and strategic backbone necessary for an organization to translate its mission into tangible results.

While the technical competence of individual leaders is vital, its influence is often mediated by the institutional context in which leadership is exercised. Board composition represents a key governance mechanism that shapes an agency's strategic direction and oversight. Indicators such as the expertise, independence, and demographic diversity of board members are pivotal to effective governance (Durant et al., 2017). A board with relevant expertise ensures informed decision-making and strategic guidance, while gender parity is known to foster more inclusive perspectives and build public trust (Baume et al., 2016). Furthermore, the independence of the board from political and special interests is essential for maintaining credibility and making unbiased decisions (Hood, 2018). The size of the board also plays a role, with an optimal size balancing diverse thought and efficient operation. This structured oversight environment is posited to amplify or constrain the impact of a leader's technical skills on the agency's performance.

The performance of state agencies is a complex construct that requires a distinct conceptualization from the traditional financial metrics of private firms. Performance in the public sector is primarily measured by the effectiveness of service delivery, productivity, and customer satisfaction (Swanson, 2020). The Organizational Performance Assessment (OPA) model, which evaluates an organization's motivation, capacity, and external environment, provides a robust framework for measuring these outcomes (Rojas & Laidlaw, 2017). Research by Bhargava (2017) and Raghupathy (2017) suggests that value-based leadership—which is closely aligned with the ethical and professional conduct fostered by strong technical skills—is fundamental to achieving and sustaining high performance in this context. While these studies provide a strong theoretical foundation, there is a lack of empirical evidence specifically linking leader technical skills, as demonstrated in a Kenyan context, to the non-financial performance metrics of state agencies. This study, therefore, seeks to investigate this specific relationship and the role of board composition as a potential moderating variable.

1.2 Statement of the Problem

Despite significant budgetary allocations and institutional reform efforts, state agencies in Kenya consistently exhibit operational inefficiencies and fiscal deficits, compromising their ability to deliver on their public service mandates. Recent data highlights the severity of this underperformance: the Kenya Railways Corporation's 2021/22 operational costs exceeded its income, the Central Bank of Kenya reported a financial shortfall of Ksh 24.34 billion in the same period, and the Roads Annuity Fund posted a loss of Ksh 12.8 billion in 2023. This is further compounded by a staggering Ksh 148 billion in pending bills accumulated by agencies like KeRRA and KeNHA, signaling systemic financial mismanagement. These persistent challenges, which have necessitated a government-led consolidation of 42 state agencies into 20 in 2025, suggest that the root causes of underperformance are not merely structural but are deeply embedded in leadership and governance failures.

While a few success stories, such as the Kenya Revenue Authority's 15% revenue increase between 2019 and 2022, have been attributed to leadership reforms, the specific attributes driving such performance improvements remain underexplored. The existing literature often addresses leadership from a broad ethical perspective, yet an empirical vacuum exists regarding the specific role of leader technical skills—defined as the specialized knowledge, expertise, and operational competence of a leader—in influencing public sector performance. It is unclear to what extent a leader's demonstrated technical proficiency in areas like objective setting, formalizing routines, and enhancing decision-making systems directly impacts the performance metrics of Kenyan state agencies, particularly those focused on service delivery rather than profit.

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Furthermore, the influence of leadership is not monolithic; it is often moderated by the institutional context. Board composition, with its indicators of expertise, independence, and diversity, is a critical governance mechanism that could either amplify or negate the effects of a leader's technical skills. While the importance of boards is recognized, there is a lack of empirical evidence from the Kenyan context on how the composition of a board moderates the relationship between a leader's technical skills and the agency's performance. Without this understanding, interventions designed to improve performance by focusing solely on leadership may fail to account for the crucial role of board-level oversight. This study, therefore, seeks to fill this critical gap by empirically evaluating the relationship between leader technical skills and the performance of state agencies in Kenya, while also investigating the moderating role of board composition.

1.3 Objective of the Study

The main objective of the study was to determine the relationship between Leader Technical Skills and Performance of State Agencies in Kenya

1.4 Specific Objective of the Study

The Specific objective of the study was to determine the moderating role of board composition on relationship between Leader Technical Skills and Performance of State Agencies in Kenya

1.5 Research Hypothesis

Based on the objectives of the study the null hypotheses were as follows:

- **H₀₁:** There is no significant relationship between Leader Technical Skills and the Performance of State Agencies in Kenya.
- **H₀₂:** Board Composition has no significant moderating effect on the relationship between Leader Technical Skills and the Performance of State Agencies in Kenya

1.6 Scope of the Study

The main focus of this study is to establish the moderating effect of Board Composition on the relationship between Leader Technical Skills and performance of State Agencies in Kenya. This study used descriptive research design and specifically post positivism approach. The population for the study was 135 State Agencies in Kenya. This study used primary data collected using a semi-structured questionnaire. Performance was studied using secondary data from their public annual reports. Data collected was analyzed using SPSS version 29. The study is expected to be conducted between December of 2021 and November of 2023.

2.0 LITERATURE REVIEW.

2.1 Conceptual Framework

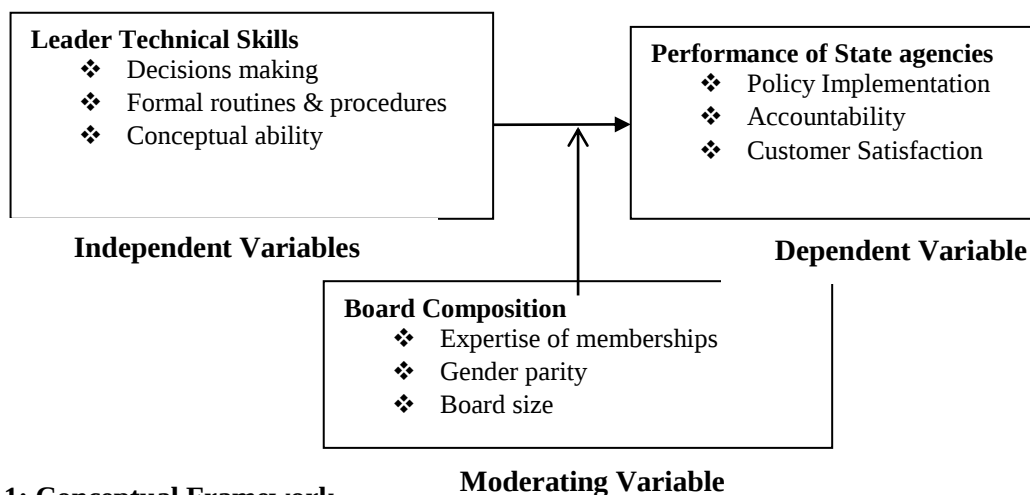


Figure 1: Conceptual Framework

2.2 Empirical Review of the Study

A robust body of literature establishes the critical role of leadership competencies in public sector administration, with scholars exploring various frameworks for leader development (Ingraham & Getha-Taylor, 2004; Getha-Taylor & Morse, 2013; Naquin & Holton III, 2003) and the impact of skills such as collaboration (Waugh Jr. & Streib, 2006; Gasco-Hernandez et al., 2022) and political acumen (Ahearn et al., 2004) on organizational outcomes. This research has been instrumental in defining the necessary attributes for effective public-sector leadership, from general strategic vision (McCausland, 2008) to ethical conduct (Haq, 2011) and the management of regulatory processes (Ryan, 2001). However, a critical review of this scholarship reveals several significant gaps. Much of the existing empirical work is theoretical or focused on competency modeling, and is overwhelmingly concentrated within developed Western contexts, particularly US federal government agencies (Radin, 2002; Krause & O'Connell, 2011), with limited generalizability to the unique institutional and socio-economic realities of state agencies in Sub-Saharan Africa. Furthermore, while the importance of leadership attributes and governance structures are often discussed in parallel, there is a distinct lack of empirical research that specifically and quantitatively investigates the direct relationship between a leader's defined technical skills—such as expertise in organizational goal setting, procedural formalization, and decision systems—and the non-financial performance of public agencies. The existing literature also fails to adequately explore how a key governance mechanism like board composition might moderate this relationship, leaving an unexamined space between individual leadership competence and institutional oversight. This study, therefore, aims to bridge these gaps by providing context-specific empirical evidence from Kenya to illuminate the causal and moderating relationships that are currently underrepresented in the global scholarship

3.0 METHODOLOGY

The study adopted a mixed research design combining both qualitative and quantitative methods, with a constructive epistemology and post-positivist approach. The target population comprised 135 state agencies in Kenya, from which a sample size of 100 was determined using Yamane's formula. Data collection utilized semi-structured questionnaires administered to board chairpersons, commissioners combining Likert scale questions and open-ended responses to capture both quantitative and qualitative insights. The study ensured research quality through pilot testing with 10 participants from unsampled agencies, and validated instruments using expert judgment and Cronbach's Alpha reliability testing. Data analysis employed both descriptive statistics (frequencies, percentages, and means) and inferential statistics including regression analysis to test the hypothesized relationships between variables. The regression models examined the direct effects of leader technical skills on agency performance, as well as the moderating effect of Board Composition. Diagnostic tests including linearity, multi-collinearity, normality, and homoscedasticity were conducted to ensure the validity of the regression analysis.

4.0 RESULTS AND ANALYSIS

4.1 Response Rate

The sample size for the study was 100 respondents from the State agencies in Kenya for the study. The selected sample was issued with questionnaires. The returned questionnaires were crosschecked for accuracy and completeness and 96 were found to be valid and reliable and could be used for further analysis and reporting. The returned questionnaires formed a response rate of 96.3%

4.2 Descriptive Analysis

4.2.1 Leader technical skills

To obtain information about the second independent variable Leader technical skills, numerous statements were asked and the respondents required to provide feedback on a likert scale of one (1) to five (5), for 1 being strongly disagree, 2 being disagree, 3 being neither agree nor disagree, 4 being agree and 5 being strongly agree to the statements. On the statement “Employees are usually involved in planning organizational goals and how to meet them on a realistic timescale” 15.1% strongly disagreed to the statement, 13.9% of the respondents disagreed to the statement, 35.5% of the respondents neither agreed nor disagreed to the statement, 24.7% of the respondents agreed to the statement whereas 10.8% of the respondents strongly agreed to the statement, with a mean of 3.02 and standard deviation 1.195.

On the statement “Participation is able to make goals more important to employees by creating a greater

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sense of ownership” 13.5% strongly disagreed to the statement, 8.8% of the respondents disagreed to the statement, 10.8% of the respondents neither agreed nor disagreed to the statement, 43.8% of the respondents agreed to the statement whereas 24.1% of the respondents strongly agreed to the statement, with a mean of 3.54 and standard deviation 1.306. On the statement “Employee participation establishes a clearly defined and thought-out direction they need to make, which will lead them to eventually achieve their longer-term wellness goals”, 5.2% strongly disagreed to the statement, 23.9% of the respondents disagreed to the statement, 19.1% of the respondents neither agreed nor disagreed to the statement, 20.7% of the respondents agreed to the statement whereas 31.1% of the respondents strongly agreed to the statement, with a mean of 3.49 and standard deviation 1.291. Regarding the statement “The management allows employees to participate in the Formulating routines and procedures”, 4.8% strongly disagreed to the statement, 15.9% of the respondents disagreed to the statement, 7.6% of the respondents neither agreed nor disagreed to the statement, 47.0% of the respondents agreed to the statement whereas 24.7% of the respondents strongly agreed to the statement, with a mean of 3.71 and standard deviation 1.145.

On the statement “Managers in our organization explain issues to employees and brainstorm solutions until the group agrees on how to resolve the issue” 4.8% strongly disagreed to the statement, 29.9% disagreed to the statement, 5.2% of the respondents neither agreed nor disagreed to the statement, 41.8% of the respondents agreed to the statement whereas 18.3% of the respondents strongly agreed to the statement, with a mean of 3.39 and standard deviation 1.223. On the statement “The organization usually brings together employees who through their analytical decision-making abilities can influence the formulation of routines and procedures.” 8.4% strongly disagreed to the statement, 2.0% disagreed to the statement, 13.9% of the respondents neither agreed nor disagreed to the statement, 55.4% of the respondents agreed to the statement whereas 20.3% of the respondents strongly agreed to the statement, with a mean of 3.77 and standard deviation 1.062. On the statement “The institution involve employees while setting the goals to be realized” 2.8% strongly disagreed to the statement, 4.8% disagreed to the statement, 12.7% of the respondents neither agreed nor disagreed to the statement, 33.5% of the respondents agreed to the statement whereas 46.2% of the respondents strongly agreed to the statement, with a mean of 4.16 and standard deviation 1.006.

On the statement “When goals are set it makes working for the employees to become swift and easy”, 4.2% strongly disagreed to the statement, 23.9% of the respondents disagreed to the statement, 19.1% of the respondents neither agreed nor disagreed to the statement, 20.7% of the respondents agreed to the statement whereas 32.1% of the respondents strongly agreed to the statement, with a mean of 3.69 and standard deviation 1.391. Finally, on the statement “Leader involves members by asking them to share ideas, perceptions, and information concerning goal setting decisions to be made on strategic goals and objectives” 10.8% strongly disagreed to the statement, 10.4% disagreed to the statement, 21.9% of the respondents neither agreed nor disagreed to the statement, 33.5% of the respondents agreed to the statement whereas 21.5% of the respondents strongly agreed to the statement, with a mean of 3.47 and standard deviation 1.240.

Table 1: Descriptive Statistics on Leader technical skills frequencies

Leader technical skills	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree	Mean	Std. Dev.
Employees are usually involved in planning organizational goals and how to meet them on a realistic timescale.	15.1	13.9	35.5	24.7	10.8	3.02	1.195
Participation is able to make goals more important to employees by creating a greater sense of ownership.	13.5	8.8	10.8	43.8	24.1	3.54	1.306
Employee participation establishes a clearly defined and thought-out direction they need to make, which will lead them to eventually achieve their longer-term wellness goals.	5.2	23.9	19.1	20.7	31.1	3.49	1.291
The management allows employees to participate in the Formulating routines and procedures	4.8	15.9	7.6	47.0	24.7	3.71	1.145
Managers in our organization explain issues to employees and brainstorm solutions until the group agrees on how to resolve	4.8	29.9	5.2	41.8	18.3	3.39	1.223

the issue.

When goals are set it makes working for the employees to become swift and easy	4.2	23.9	19.1	20.7	32.1	3.69	1.391
The organization usually brings together employees who through their analytical decision-making abilities can influence the formulation of routines and procedures.	8.4	2.0	13.9	55.4	20.3	3.77	1.062
The institution involve employees while setting the goals to be realized	2.8	4.8	12.7	33.5	46.2	4.16	1.006
Leader involves members by asking them to share ideas, perceptions, and information concerning goal setting decisions to be made on strategic goals and objectives	10.8	10.4	21.9	35.5	21.5	3.47	1.240

4.2.2 Board Composition

To obtain information about the intervening variable Board Composition, various statements were asked and the respondents required to provide feedback on a likert scale of one (1) to five (5), for 1 being strongly disagree, 2 being disagree, 3 being neither agree nor disagree, 4 being agree and 5 being strongly agree to the statements. On the statement “Perceived independence of state agencies in Kenya influence their effectiveness in upholding ethical standards and ensuring accountability” 4.8% strongly disagreed to the statement, 13.5% of the respondents neither agreed nor disagreed to the statement, 63.3% of the respondents agreed to the statement whereas 18.3% of the respondents strongly agreed to the statement, with a mean of 3.90 and standard deviation 0.862.

On the statement “legal frameworks and institutional structures governing the establishment and operation of state agencies in Kenya impact their autonomy and independence in decision-making.” 2.8% strongly disagreed to the statement, 2.0% of the respondents disagreed to the statement, 4.8% of the respondents neither agreed nor disagreed to the statement, 76.1% of the respondents agreed to the statement whereas 14.3% of the respondents strongly agreed to the statement, with a mean of 3.97 and standard deviation 0.723. On the statement “Legal frameworks and institutional structures governing the establishment and operation of State Agencies in Kenya impact their autonomy and independence in decision-making”, 12.7% strongly disagreed to the statement, 5.6% of the respondents disagreed to the statement, 12.0% of the respondents neither agreed nor disagreed to the statement, 44.2% of the respondents agreed to the statement whereas 25.5% of the respondents strongly agreed to the statement, with a mean of 3.64 and standard deviation 1.274.

Regarding the statement “The level of independence of State Agencies in Kenya correlate with their performance in fulfilling their mandates, including investigating misconduct, promoting transparency, and upholding the rule of law”, 20.7% disagreed to the statement, and 25.9% of the respondents neither agreed nor disagreed to the statement, 37.1% of the respondents agreed to the statement whereas 16.3% of the respondents strongly agreed to the statement, with a mean of 3.49 and standard deviation 0.997.

On the statement “Variations in board composition, including expertise, gender parity, and independence, influence public trust, confidence, and perceptions of legitimacy regarding the ethical conduct and performance of State Agencies in Kenya” 2.8% strongly disagreed to the statement, 12.4% disagreed to the statement, 29.5% of the respondents neither agreed nor disagreed to the statement, 37.5% of the respondents agreed to the statement whereas 17.9% of the respondents strongly agreed to the statement, with a mean of 3.55 and standard deviation 1.012. On the statement “Policies are critical determinant of how institution delivers its services effectively;” 12.4% of the respondents neither agreed nor disagreed to the statement, 48.6% of the respondents agreed to the statement whereas 39.0% of the respondents strongly agreed to the statement, with a mean of 4.27 and standard deviation 0.667.

On the statement “There are strategies and interventions can be implemented to enhance the expertise, gender parity, and independence of commission boards in Kenya” 11.2% of the respondents disagreed to the statement, 12.0% of the respondents neither agreed nor disagreed to the statement, 59.8% of the respondents agreed to the statement whereas 17.1% of the respondents strongly agreed to the statement, with a mean of 3.83 and standard deviation 0.843.

On the statement “There are mechanisms and practices employed by state agencies in Kenya to ensure the independence of board members from undue political, economic, or other external pressures” 8.4% of the

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 respondents neither agreed nor disagreed to the statement, 52.2% of the respondents agreed to the statement whereas 39.4% of the respondents strongly agreed to the statement, with a mean of 4.27 and standard deviation 0.967.

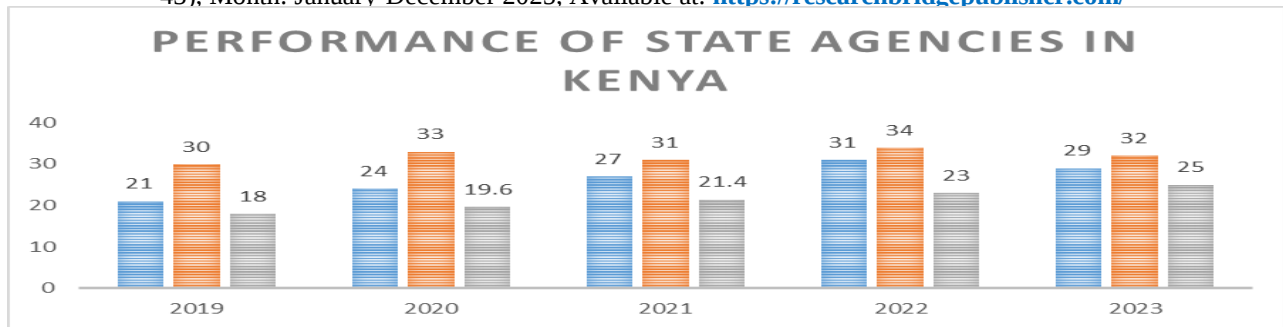
On the statement “There are specific policies, regulations, or guidelines governing board composition and appointment processes for State Agencies in Kenya, and how do these regulations impact the diversity, independence, and effectiveness of commission boards” 13.2% of the respondents disagreed to the statement, 10.0% of the respondents neither agreed nor disagreed to the statement, 59.8% of the respondents agreed to the statement whereas 17.4% of the respondents strongly agreed to the statement, with a mean of 3.83 and standard deviation 0.743

Table 2: Descriptive Statistics on Board Composition

Board Composition	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree	Mean	Std. Dev.
Perceived independence of State Agencies in Kenya influences their effectiveness in upholding ethical standards and ensuring accountability	4.8	-	13.5	63.3	18.3	3.90	0.862
Legal frameworks and institutional structures governing the establishment and operation of state agencies in Kenya impact their autonomy and independence in decision-making.	2.8	2.0	4.8	76.1	14.3	3.97	0.723
Legal frameworks and institutional structures governing the establishment and operation of State Agencies in Kenya impact their autonomy and independence in decision-making	12.7	5.6	12.0	44.2	25.5	3.64	1.274
The level of independence of state agencies in Kenya correlate with their performance in fulfilling their mandates, including investigating misconduct, promoting transparency, and upholding the rule of law.	0.0	20.7	25.9	37.1	16.3	3.49	0.997
Variations in board composition, including expertise, gender parity, and independence, influence public trust, confidence, and perceptions of legitimacy regarding the ethical conduct and performance of State Agencies in Kenya.	2.8	12.4	29.5	37.5	17.9	3.55	1.012
Policies are critical determinant of how institution delivers its services effectively.	0.0	0.0	12.4	48.6	39.0	4.27	0.667
There are strategies and interventions can be implemented to enhance the expertise, gender parity, and independence of commission boards in Kenya	0.0	11.2	12.0	59.8	17.1	3.83	0.843
There are mechanisms and practices employed by State Agencies in Kenya to ensure the independence of board members from undue political, economic, or other external pressures	0.0	0.0	8.4	52.2	39.4	4.27	0.967
There are specific policies, regulations, or guidelines governing board composition and appointment processes for State Agencies in Kenya, and how do these regulations impact the diversity, independence, and effectiveness of commission boards	0.0	13.2	10.0	59.8	17.4	3.83	0.743

4.2.3 Performance of State agencies

The main objective of the study was to examine the relationship between leadership ethics and performance of State agencies in Kenya. Secondary data depicted the following results.



The findings show that there has been an increase in the indicators of performance of state agencies in Kenya from 2019 to 2023 measured by Volume of success, productivity and customer satisfaction. These findings agree with Katiba Institute, the independence, accountability, and capability of Kenyan constitutional state agencies were scrutinized, revealing sections needing enhancement (Katiba Institute, 2020). Furthermore, the National Assembly Departmental Committee on Justice and Legal Affairs reviewed the performance of chosen independent bodies in Kenya, suggesting ways to boost overall effectiveness within public establishments (National Assembly Departmental Committee on Justice and Legal Affairs, 2019).

Additionally, a UNDP report accentuated the value of bolstering public inclusion during Kenya's constitution execution procedure, urging heightened openness and liability from constitutional state agencies for efficient service delivery tailored to citizens' demands (United Nations Development Programme, 2018). Overall, existing research signals the urgent requirement for amplified efficacy, attentiveness, and stakeholder interaction from Kenya's constitutional state agencies.

4.3 Inferential Statistics

The objective of the study was to determine the influence of leader technical skills on Performance of State Agencies in Kenya. The corresponding hypothesis was:

H₀₁: There is no significant relationship between Leader Technical Skills and the Performance of State Agencies in Kenya.

H₀₂: Board Composition has no significant moderating effect on the relationship between Leader Technical Skills and the Performance of State Agencies in Kenya

A univariate analysis was therefore conducted to test the null hypothesis. The **Model Summary** table presents two models. Model 1 is a simple regression model with only "Leader Technical Skills" as the predictor. The R-squared value for this model is 0.336, which means that 33.6% of the variance in the "Performance of State Agencies in Kenya" can be explained by "Leader Technical Skills" alone. The adjusted R-squared is 0.334, indicating a very similar result after accounting for the number of predictors. The F Change for Model 1 is 150.295, with a significance level of 0.000. This highly significant p-value ($p < .001$) suggests that the overall model is a good fit for the data and that "Leader Technical Skills" is a statistically significant predictor of agency performance.

Model 2 introduces "Board Composition" and the interaction term between "Leader Technical Skills" and "Board Composition" into the analysis. The R-squared value for this model increases to 0.568, indicating that 56.8% of the variance in the dependent variable is now explained by the predictors. The change in R-squared, or R-squared Change, from Model 1 to Model 2 is 0.232. This significant increase of 23.2% in the explained variance, with an F Change of 79.360 and a p-value of 0.000, provides strong evidence of a significant moderating effect. This means that the addition of "Board Composition" and its interaction with "Leader Technical Skills" significantly improved the model's ability to predict the performance of state agencies in Kenya.

Table 3: Model Summary for Leader Technical Skills

Model	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics			
				R Square Change	F Change	df1	df2 Sig. F Change
1	.580 ^a .336	.334	.65170	.336	150.295	1	95 .000

2 .754^b.568 .564 .52727 .232 79.360 2 94 .000

a. Predictors: (Constant), Leader Technical Skills

b. Predictors: (Constant), Leader Technical Skills, Board Composition, Interaction (X*Z)

The ANOVA table provides further detail on the overall significance of the models. For Model 1, the regression sum of squares is 63.832, with a mean square of 63.832 and an F-statistic of 279.96. The significance level is 0.000 ($p < .001$), which supports the conclusion that the model with "Leader Technical Skills" is statistically significant. For Model 2, the regression sum of squares is 107.958, with a mean square of 53.979 and an F-statistic of 372.526. This model is also highly significant, with a p-value of 0.000. These findings from the ANOVA table are consistent with the Model Summary and confirm that both models are statistically significant in predicting the performance of state agencies.

Table 4: ANOVA for Moderation Effect

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	63.832	1	63.832	279.96	.000 ^b
	Residual	21.675	95	0.228		
	Total	85.507	96			
2	Regression	107.958	2	53.979	372.526	.000 ^c
	Residual	13.622	94	0.1449		
	Total	121.58	96			

a. (Constant).; Performance of State Agencies in Kenya

b. (Constant), Board Composition, Leader Technical skills

c. Dependent Variable: Performance of State Agencies in Kenya

The Beta Coefficients table is crucial for understanding the individual contributions and significance of each predictor. In Model 1, the beta coefficient for "Leader Technical Skills" is 0.580, which is statistically significant with a t-statistic of 12.260 and a p-value of 0.000. The unstandardized coefficient (B) is 0.608, indicating that for every one-unit increase in "Leader Technical Skills," the "Performance of State Agencies in Kenya" is predicted to increase by 0.608 units.

In Model 2, with the addition of "Board Composition" and the interaction term, the coefficients change. The beta coefficient for "Leader Technical Skills" is now 0.782, with a t-statistic of 3.284 and a p-value of 0.002. This remains statistically significant, suggesting that even after accounting for board composition, technical skills are still an important predictor. The beta coefficient for "Board Composition" is 0.310, with a t-statistic of 6.748 and a p-value of 0.000, indicating that board composition is also a significant predictor of agency performance. The most important finding in this table is the coefficient for the "Interaction (X*M)" term. The beta coefficient is 1.661, with a t-statistic of 4.357 and a p-value of 0.000. The statistical significance of this interaction term confirms the presence of a moderation effect. This means that the relationship between "Leader Technical Skills" and the "Performance of State Agencies in Kenya" is not constant but is significantly influenced by "Board Composition".

Table 5: Beta Coefficients for Moderation Effect

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.387	.194		7.163	.000
	Leader Technical Skills	.608	.050	.580	12.260	.000
2	(Constant)	3.876	1.009		3.841	.000
	Leader Technical Skills	.220	.067	.782	3.284	.002
	Board Composition	.325	.048	.310	6.748	.000
	Interaction (X*M)	.283	.065	1.661	4.357	.000

a. Dependent Variable: Performance of State Agencies in Kenya

5.0 SUMMARY, CONCLUSION AND RECOMMENDATIONS OF THE STUDY

5.1 Summary of The Study

The study on the relationship between leader technical skills and the performance of state agencies in Kenya, with board composition as a moderating variable, provides a critical empirical foundation for understanding public sector governance in emerging economies. The investigation, which utilized a mixed-

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method design and post-positivist approach, successfully established the significant positive influence of a leader's technical skills on an agency's performance. Furthermore, it revealed that this relationship is not straightforward, but is powerfully moderated by the composition of the agency's board. The research's summary of findings indicates that leader technical skills—defined as the practical knowledge and competencies needed to manage bureaucratic systems, implement policies, and utilize technology—are crucial for effective public institution management. The inferential statistics powerfully support this assertion, showing that leader technical skills alone explain approximately 33.6% of the variance in the performance of state agencies. This suggests that leaders who excel at goal-setting, formalizing routines, and making data-driven decisions are more likely to lead their organizations to success in terms of policy implementation, accountability, and customer satisfaction. The regression analysis confirmed this, with a statistically significant positive coefficient, demonstrating that an improvement in a leader's technical proficiency directly correlates with improved agency performance.

5.2 Conclusion of The Study

Beyond the direct effects, the study's most significant contribution is the identification of board composition as a key moderating variable. When board composition was introduced into the statistical model, the explained variance in agency performance jumped to 56.8%. This substantial increase, validated by a highly significant interaction term, indicates that the effect of a leader's technical skills is amplified by the expertise, diversity, and independence of the board. This finding leads to the central conclusion of the study: for state agencies in Kenya, high performance is not merely a function of having a technically skilled leader but is a product of a synergistic relationship between that leader and a well-composed, competent board. A strong board provides the strategic oversight and ethical framework that allows a leader's technical competence to translate into tangible, high-impact outcomes.

5.3 Recommendations of The Study

Based on these findings, a number of crucial recommendations can be made for policymakers and stakeholders. First, efforts to improve public sector performance should be dual-focused, addressing both individual leadership capabilities and institutional governance structures. This means prioritizing the recruitment and training of leaders with demonstrable technical skills, particularly in the areas of operational efficiency and ethical resource management. Second, and equally important, is the need to reform board appointment processes to ensure the selection of members with relevant expertise, professional independence, and demographic diversity. By fostering a governance environment where boards are equipped to provide effective oversight, the positive effects of technically proficient leadership can be maximized, ultimately leading to greater accountability, better service delivery, and enhanced public trust in state agencies.

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