Strategic Approaches in Strategy Implementation and Performance of Kenya National Highways Authority

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**ABSTRACT**

Many public sector agencies fail to attain their performance targets because of flaws in their strategy implementation processes. There is no guarantee that the formulation and implementation of strategies automatically translate to organizational success owing to the complex yet delicate nature of strategic management. Thus, the present study examined the effect of strategy implementation on the performance of Kenya National Highways Authority (KeNHA), focusing on strategic leadership adoption, resource allocation, communication system, organizational culture, and organizational structure as the independent variables. The study was anchored on the resource-based view theory, Edgar Schein Theory, systems theory, and the upper echelons theory. A descriptive design was used, and the target population included 187 top managers working indifferent departments at KeNHA. The study used stratified and random sampling techniques to select 94 participants to the study. Closed-ended questionnaires were used to collect primary data from the participants. A Likert scale of 1 to 5 was used to evaluate the participants’ responses. The means, standard deviations, and aggregate means of the participants’ responses were calculated and presented in tables. The results indicated that strategic leadership adoption, resource allocation, communication system, organizational culture, and organizational structure influenced KeNHA’s performance but to varying extents. Strategic leadership adoption had the biggest effect on performance. The research concluded that strategic leadership significantly and positively impacted KeNHA’s performance. The management of KeNHA and other road management agencies ought to prioritize strategic leadership practices in their strategy design and execution to achieve better performance outcomes. The findings exhort further research on strategic management aspects in KeNHA’s external environment and their effect on organizational performance.

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**Introduction**

Strategy implementation refers to the process of executing a plan in an organization to achieve the set goals. The management of organizations plays a critical role in selecting strategic options and deciding on how the options will be pursued in the organization (Philemon & Kessy, 2016). Mutisya (2016) observes that top management should provide financial, technical, and human resources for the successful implementation of strategy since the inadequacy of resources may slow down the process of strategy implementation. Nwachukwu et al. (2019) also identify financial resources, organizational structure, and policy as key determinants of successful strategy implementation. Besides, the availability of a reliable and effective communication system is critical to facilitate information exchange among stakeholders and foster strategy implementation success (Wangeci, 2017). Organizational structure and culture are other important enablers of successful strategy implementation (Muendo, 2016). Numerous studies in the literature contend that strategy implementation influences organizational performance (Barca, 2017; Mailu et al., 2018; Okwemba & Njuguna, 2021; Omondi et al., 2017; Philemon & Kessy, 2016).

Organizational performance collectively adds up to the actual results of the organization in comparison to the prior intended output of the firm. Key Performance Indicators (KPIs) play a pivotal role in the measurement of organizational performance (Anil & Satish, 2016). KPIs may be classified into (i) the metrics of finance which may include human finances, (ii) customer metrics including teamwork and creativity, (iii) information technology, for example, communication, (iv) meeting of strategic and operational targets (v) staffing (Famiyeh, 2017). The Balanced Score Card (BSC) is a significant tool that is commonly used to measure the performance of organizations. Chopra and Gupta (2020) mention that a balanced scorecard is a strategic framework that companies use to prioritize their service projects and plan their routine activities. Hence, the company’s strategies and performance are monitored. It also evaluates the management team in the contribution of set strategies compared to its competitors. Against this background, the present study sought to determine the strategic approaches adopted in strategy implementation and their influence on the performance of road management agencies in Kenya, using the case of KeNHA.

**Statement of the Problem**

KeNHA is a road management agency created under the Kenya Roads Act in 2007. The agency’s mandate is to maintain, manage, and develop international trunk roads to link important local and international commercial centers. KeNHA has a clear strategic roadmap that has guided its operations since its inception (KeNHA, 2020). However, no single study has been carried out to determine the influence of the agency’s strategy implementation practices on performance. There are contextual gaps in research as most studies have explored the relationship between strategy implementation and performance in other organizations. Ratemo (2016), Waweru (2018), Nyagilo and Njeru (2020), Wangeci (2017), and Mutisya (2016) studied the impact of strategy implementation on the performance of Kenya Electricity Generating Company (KENGEN) Limited, Kenya Commercial Bank (KCB), Kenya Ports Authority (KPA), Kenya Anti-Corruption Commission (KACC), and Churches respectively. The unique contexts in which those organizations operate suggest that the results cannot necessarily be applied to the context of KeNHA. Other contextual gaps are evident in studies,
such as Reverte et al. (2016) and Lee and Kim (2017), who studied the association between strategy implementation and performance of Spanish and Korean firms, respectively. The contextual gaps in research necessitated the conduct of a new study focusing on the singular context of road management agencies in Kenya, particularly KeNHA.

Furthermore, KeNHA is one of the public sector agencies in Kenya that struggles to meet its strategic goals and discharge its mandate despite having a clear strategic plan. Many times, the agency underperforms in project completion due to factors including budgetary constraints, poor scheduling, contractor-related factors, and internal strategic management factors among others (Akinyi, 2022). Understanding the role of strategy implementation in organizational performance could help dissect the challenges facing KeNHA. Besides, Ratemo (2016) contends that strategy implementation is complex and delicate, and the mere implementation of laid-out plans does not guarantee good organizational performance. Thus, the present study could shed light on the factors impeding the success of KeNHA’s strategies.

Lastly, there were conceptual gaps in the literature that informed the present study. Willar et al. (2016) and Lee and Kim (2017) focused on organizational culture only. Reverte et al. (2016) focused on corporate social responsibility practices while Waweru (2018) only focused on strategic decision-making. Okendo (2018), and Omondi et al. (2017) focused on organizational structure only, and Nyagilo and Njeru (2020) focused on corporate governance practices. Strategy implementation is a broad discipline, and it is evident that a number of variables including communication system adoption, strategic leadership adoption, and resource allocation, have not received considerable attention in the literature. Thus, the present study sought to fill the conceptual gaps in the literature by choosing strategic leadership adoption, resource allocation, communication system, organizational culture, and organizational structure as the strategy implementation practices.

**Objectives of the Study**

I. To identify the effect of leadership adoption on the performance of KeNHA.

II. To determine the effect of resource allocation on the performance of KeNHA.

III. To find the effect of a communication system on the performance of KeNHA.

IV. To establish the effect of organizational culture on the performance of KeNHA.

V. To identify the effect of organizational structure on the performance of KeNHA.

**Review of Literature**

**Theoretical Review**

**Resource-Based View**

The theory was developed by Barney (1991) and stresses the centrality of a firm’s resources in building and sustaining competitive advantage. Hitt et al. (2016) mention that a given firm develops capabilities to capture the values that resources offer and this exploits them to give advantages over their competitors. The theory was pertinent to this study as it dissected the influence of resource allocation on firm performance.
The first proponents of upper echelon theory were Hambrick and Mason (1984). The theory fronts the idea that the management should make plausible decisions to guarantee organizational performance. The current study used the theory to understand the contribution of strategic leadership toward the performance of an organization.

Edgar Schein Theory
Schein (1980) was the advocator of Edgar Schein's Theory, which focuses on a firm’s culture as the primary source of support for organizational change. It was used to elaborate on artifacts and values in KeNHA and their impact on the firm’s performance in general. Thus, this theory underpinned the organizational culture variable.

Systems Theory
Ludwig von Bertalanffy put forward the systems theory in 1968 to conceptualize firms as complex entities comprising individual elements that interact to form a whole. The elements include customers, shareholders, and government among others (Morgeson, 2015). As applied in the present study, the system theory was used to dissect strategic implementation practices as constituent parts of the organization’s performance metrics and unearth their interrelationships.

Empirical Review
Strategic Leadership and Performance
Lee and Welliver (2018) researched the role of leadership strategies on organizational performance. Data was collected via questionnaires. The findings showed a positive correlation between leadership strategies and firm performance. However, the study only focused on leadership, while the present study focused on four other strategic implementation practices to give a clearer picture. A broader perspective was given by Gupta et al. (2018) who researched how leadership influences firm performance. A survey design was adopted on 218 administrative officers in India. The findings pointed out that a strategic leader formulates strategies that are challenging while at the same time having the ability to counter them in the competitive market. Like Lee and Welliver (2018), there is a conceptual gap in Gupta et al. (2018) as it only focused on strategic leadership, exhorting further research on other strategic management aspects.

Gupta et al. (2018) compare this with an earlier study by Mutisya (2016) on the role of strategy implementation in churches’ growth in Kenya, which showed that strategic leadership plays a critical role in the performance of churches. The study variables included culture, ethical practices, capital, and strategic direction. The study gap evident in this research is that it focused on strategic implementation and the growth of churches context, which is different from the current research in the context of a government-owned agency.

Further, Ndurya (2016) studied the factors that influence implementation strategy in Mombasa water supply companies. The study employed a descriptive design on 436 respondents. It was noted that there was poor performance in all organizations that lacked confidence from management at the top. However, the study focused on water supply companies and the findings cannot be generalized to road management agencies.
Lastly, Khaleji (2019) analyzed the strategic leadership's effect on the implementation of strategy in the Kisumu real estate sector. A descriptive survey design was used on 50 participants. The questionnaire method was employed to gather data. This study showed that strategic leadership and strategy implementation should be combined when there is an availability of resources for the real estate industry growth spurt. However, the study focused on the real estate industry, whose measures of performance are different from the road management agencies.

**Resource Allocation and Performance**

With a focus on SMEs in Mexico, Velasco-Gutiérrez et al. (2020) conducted research on the capabilities of a firm and its growth strategies. The survey focus was on CT managers. Study findings demonstrated that financial and technological resources and the firm’s organic growth in an organization are strongly associated. However, contextual differences exist because the study was undertaken in Mexico while the current study was in Kenya.

Also, Feng et al. (2015) researched strategy implementation on the performance of US firms. To achieve the objective, a cross-industry sample of 612 firms was adopted to collect data. The study findings showed that resources based on knowledge played a pivotal role in growth compared to prosperity based on resources. The gap present in the research emanates from contextual differences between the studies. Feng et al. (2015) study focused on multiple firms, while the current study sought to gather information from individual departmental employees in an agency.

Moreover, Buuni et al. (2015) examined the link between resource allocations in project implementation and the performance of Somaliland water agencies. The findings showed that firm performance is positively linked to human resource capability as compared to procedures and protocols. Nonetheless, the study focused on the capability of an organization, which is a single aspect of resources in an entity. To better understand the mechanisms of resource allocation and its effects, Joseph and Kibera (2019) investigated the determinants of strategy implementation and financial performance in Kenya. The results stipulated that resource allocation positively affects the performance of financial institutions. However, there are contextual differences between financial institutions and road management agencies.

**Strategy Communication System and Performance**

Obeidat et al. (2017) studied strategy communication influence and performance of Middle East Pharmaceutical enterprises and showed a positive correlation. The gap therein was that it focused on pharmaceutical companies, while the present study focused on road management agencies. Also, Udegbe et al. (2012) looked at the role of business communication on the performance of organizations in Nigeria. A sample data of 100 manufacturing companies in Lagos State in Nigeria was obtained using the survey method. Findings revealed that effective business communication influenced the performance of both service and manufacturing companies operating in Nigeria. However, the results can considerably differ because of the geographical difference between Kenya and Nigeria.

Oku et al. (2017) studied the role of strategic communication and the implementation of child vaccination programs in Nigeria. Data was collected via interviews. Findings attested that clear communication with organizational stakeholders and employees improved the achievement of objectives. Contextual gaps emerge from the study because it was based in
Nigeria and focused on vaccination programs. In the same vein, Mutisya (2016) looked at communication influence on strategy implementation among Nairobi’s pharmaceutical companies. The study applied a descriptive survey research design on 64 pharmaceutical managers. Questionnaires were administered for data collection. Findings demonstrated that communication strategy has a significant effect on these companies’ performance. However, pharmaceutical companies are contextually different from road management agencies.

**Organizational Culture and Performance**

Willar et al. (2016) studied the effect of organizational culture on the performance of Indonesian construction companies. The target population was all Indonesian construction companies. Data was collected via questionnaires. Findings revealed that culture and the attitude employees have towards firms can enable easy facilitation of strategy implementation in the current changing environments in businesses. However, the study focused on construction firms in Indonesia while this study focused on a government-owned agency in Kenya.

Similarly, Boubakri and Saffar (2016) studied the influence of culture on the performance of financial firms from 56 nations. Questionnaires were used to collect data, and findings indicated that there is a positive connection between culture and the growth of a firm. However, the researcher failed to establish how organizational culture affected the performance of the firm as strategy implementation, which is the aim of this study.

Also, Lee and Kim (2017) investigated the role of organizational culture on the performance of Korean firms. The findings stipulated that the culture of an organization is paramount in supporting the firm’s growth. This research differs methodically and contextually from the current one, laying grounds for further research.

**Organizational Structure and Performance**

El Talla et al. (2018) investigated non-governmental organization performance in Palestinian territories in relation to organizational structure. Organizational structure was positively found to be related to market shares, operational performance, efficiency, and sales volumes. However, the study was carried out in the Pakistan context and not in Kenyan, thus a gap. Similarly, Dai et al. (2017) determined the role of organizational structure capabilities on the performance of Chinese firms. The findings attested that organizational structure disseminates knowledge faster in a firm, increasing the ability to react to any environmental change. However, the study proposed a comparative study in business sectors indicating a practical-knowledge gap.

A broader perspective has been adopted by Maduenyi et al. (2015), who examined the contribution of organizational structure and the performance of the business in manufacturing firms. The sample size was 220 employees. Data was gathered using questionnaires with 98% as the response rate. The findings affirmed that the structure of an organization has a strong impact on firm growth. Nonetheless, the study was done in Nigeria, while the current study was conducted in a Kenya firm. Okendo (2018) researched the impact of organizational structure and the performance of Pentecostal Churches in Nairobi. The participants were senior managers. The findings stipulated that organizational structure determined the churches’ performance outcomes. However, the study was done among Nairobi’s Pentecostal churches, and the present one focused on a firm.
Lastly, Muriu (2019) looked at the influence of organizational structure on mobile commerce on the performance of commercial banks in Kenya. Data collection was done from 133 managers using stratified random sampling. Results obtained showed that organizational structure positively impacted firm performance. A contextual gap emerged since the study focused on banks while the current study was on road management agencies.

**Method**

This study used a descriptive survey design. As Muathe (2010) and Mohajan (2018) affirm, descriptive survey design is the most appropriate when not much is known about the problem, and the mandate of the study is mainly to identify categories, characteristics, and trends. The target population of the study was 187 top-level management employees working in various departments at KeNHA. According to KeNHA (2021), there are 187 individuals in the strategic department (24), information technology (23), operations (18), procurement (39), project management (32), and finance departments and capacities (51). The research utilized stratified and random sampling techniques to select 94 participants from every department as follows; strategic department (12), information technology (12), operations (9), procurement (19), project management (16), and finance departments and capacities (26). The data was collected via a closed-ended questionnaire. The questionnaire was split into six distinct sections. Section A provided demographic information; Section B information on each strategy implementation independent variable as a strategy indicated by the study indicators, namely strategic leadership, resource allocation, communication system strategy implementation information, organization culture strategy information, and organizational structure strategy information. The current study also used a five-point Likert scale to design the questionnaire, where 1 indicated strong disagreement, and 5 denoted strong agreement. Cronbach's Alpha was employed to gauge the questionnaire's consistency as a data collection tool. The threshold of this was .70, and any values less than .70 were revised or removed. Values greater than .70 showed more agreement among the survey questions and thus were deemed acceptable reliability. The reliability test results are presented in Table 1.

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Cronbach’s Alpha for the Questionnaire</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>No. of items</td>
</tr>
<tr>
<td>Strategic leadership</td>
<td>5</td>
</tr>
<tr>
<td>Resource Allocation</td>
<td>5</td>
</tr>
<tr>
<td>Communication system</td>
<td>5</td>
</tr>
<tr>
<td>Organizational culture</td>
<td>5</td>
</tr>
<tr>
<td>Organizational structure</td>
<td>5</td>
</tr>
<tr>
<td>Total reliability for the questionnaire</td>
<td>25</td>
</tr>
</tbody>
</table>

*Note. Source: Pilot Test Data (2023)*

The revised research instrument achieved a total reliability of .79. This was reliable, consistent with Bujang et al. (2018). Similarly, all the survey items for the five variables were reliable because they attained Cronbach’s alpha values of greater than .70. This is in line with Tavakol and Dennick (2011), who contend that Cronbach’s alpha values of .70 or more generally show that a research instrument is reliable.

The means, standard deviations, and aggregate means of the participants’ responses as measured by the Likert scale were calculated and presented in tables. The relationships...
governing the independent and dependent variables were shown using the regression model below:
\[ Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \epsilon \]

Where:
- \( y \) = dependent variable value (Firm performance)
- \( \beta_0 \) = Constant value \( \beta_1 \)-\( n \) is the regression of the beta coefficient
- \( X_1 \) = Leadership strategic implementation
- \( X_2 \) = Resource allocation strategic implementation
- \( X_3 \) = Communication system adoption strategic implementation
- \( X_4 \) = Organizational culture
- \( X_5 \) = Organizational structure
- \( \epsilon \) = The Error term

The current study’s regression results were interpreted at a 5% significance level.

**Results**

**Baseline Information**

Seventy-nine (79) out of 94 participants returned the questionnaires, representing a response rate of 84 percent, which is considered excellent according to Mugenda and Mugenda (2003). The mean age of the participants was 48 years, indicating that most of the respondents were at the peak of their careers and firmly understood the firm’s strategic management aspects. All the participants (100%) were university graduates, suggesting they were competent to provide information about KeNHA’s strategic implementation practices. Lastly, more than 86% of the participants had worked at KeNHA for at least three years and were therefore conversant with their departments’ strategic implementation practices.

**Strategic Leadership Adoption and Performance**

The present research explored the impact of strategic leadership adoption on KeNHA’s performance. The results are presented in Table 2. The findings indicate that strategic leadership adoption at KeNHA affected firm performance since resources are effectively used at KeNHA to enhance quality of roads and complete projects in time (\( M = 3.74, SD = .81 \)); there are clear objectives, deliverables, and performance indicators for every road project (\( M = 3.98, SD = .78 \)); there is robust stakeholder involvement in strategic planning and decision making (\( M = 3.86, SD = .74 \)); employees are rewarded based on their performance (\( M = 3.05, SD = .82 \)); and the leadership has set a vision for KeNHA’s future (\( M = 3.62, SD = .76 \)).

**Table 2**

<table>
<thead>
<tr>
<th>S/No</th>
<th>STATEMENT</th>
<th>( M )</th>
<th>( SD )</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Resources are effectively used to achieve road quality and project completion timelines</td>
<td>3.74</td>
<td>.81</td>
</tr>
<tr>
<td>2</td>
<td>There are clear goals and deliverables and performance indicators for every road project</td>
<td>3.98</td>
<td>.78</td>
</tr>
<tr>
<td>3</td>
<td>There is robust stakeholder involvement in strategic planning and decision making</td>
<td>3.86</td>
<td>.74</td>
</tr>
<tr>
<td>4</td>
<td>Employees are rewarded by the leadership based on their overall performance</td>
<td>3.05</td>
<td>.82</td>
</tr>
<tr>
<td>5</td>
<td>The leadership has set a vision for the future of the firm</td>
<td>3.62</td>
<td>.76</td>
</tr>
</tbody>
</table>

*Note. Source: Field Data June 2023*
Resource Allocation and Performance
The study determined the influence of resource allocation on KeNHA’s performance. The results are presented in Table 3. The results show that resource allocation at KeNHA impacted its performance since every department has adequate technological resources to support the discharge of their mandates ($M = 3.85, SD = .82$); every department has sufficient number of staff to enhance project execution and road quality ($M = 4.14, SD = .86$); KeNHA continually trains its staff to improve road quality ($M = 3.79, SD = .79$); adequate budgetary allocations are made for strategic planning and implementation to improve project quality ($M = 3.67, SD = .66$); and every department has adequate materials and equipment to guarantee project completion and quality ($M = 3.70, SD = .90$).

<table>
<thead>
<tr>
<th>Table 3 Resource Allocation and KeNHA’s Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>S/No.</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>1.</td>
</tr>
<tr>
<td>2.</td>
</tr>
<tr>
<td>3.</td>
</tr>
<tr>
<td>4.</td>
</tr>
<tr>
<td>5.</td>
</tr>
</tbody>
</table>

Note. Source: Field Data June 2023

Communication System Adoption and Performance
The present research explored the impact of communication systems on KeNHA’s performance. The results are presented in Table 4. The results show that the communication system affects KeNHA’s performance. It is evident that communication system channels adopted in this agency enhance the attainment of its goals ($M = 3.95, SD = .89$); the management shares the organization’s vision from time to time to enable the attainment of project goals ($M = 4.27, SD = .86$); there is involvement of other stakeholders who are not employees of KeNHA at relevant instances to infuse multiple perspectives and ideas in the organization ($M = 3.82, SD = .78$); agency has deliberate programs to foster management and employee relationship by explaining the agency’s objectives and goals ($M = 3.91, SD = .85$); and giving feedback to employees whether positive or negative is the culture of this agency ($M = 4.13, SD = .81$).

<table>
<thead>
<tr>
<th>Table 4 Communication System Adoption and KeNHA’s Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>S/No.</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>1.</td>
</tr>
<tr>
<td>2.</td>
</tr>
<tr>
<td>3.</td>
</tr>
<tr>
<td>4.</td>
</tr>
<tr>
<td>5.</td>
</tr>
</tbody>
</table>

Note. Source: Field Data June 2023

Organizational Culture and Performance
The present study examined the effect of organizational culture on KeNHA’s performance. The results are presented in Table 5. The findings show that organizational culture impacts KeNHA’s performance. The analysis shows that KeNHA’s mission and vision perfectly align with its values ($M = 3.48, SD = .76$); KENHA’s culture is people-centred to improve
employee productivity and achieve project goals ($M = 3.19, SD = .68$); KeNHA’s values are entrenched in every department ($M = 3.56, SD = .72$); innovation and creativity among staff are encouraged ($M = 3.94, SD = .91$); and KENHA has a strong ethical climate to support its values and improve performance ($M = 3.90, SD = .83$).

**Table 5**

Organizational Culture and KeNHA’s Performance

<table>
<thead>
<tr>
<th>S/No.</th>
<th>STATEMENT</th>
<th>$M$</th>
<th>$SD$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>KeNHA’s mission and vision perfectly aligns with its values</td>
<td>3.48</td>
<td>.76</td>
</tr>
<tr>
<td>2.</td>
<td>KeNHA’s culture is people-centred to improve employee productivity and achieve project goals</td>
<td>3.19</td>
<td>.68</td>
</tr>
<tr>
<td>3.</td>
<td>The organization’s values are entrenched in every department</td>
<td>3.56</td>
<td>.72</td>
</tr>
<tr>
<td>4.</td>
<td>Innovation and creativity among staff is encouraged</td>
<td>3.94</td>
<td>.91</td>
</tr>
<tr>
<td>5.</td>
<td>The organization has a strong ethical climate to support its values improve performance</td>
<td>3.90</td>
<td>.83</td>
</tr>
</tbody>
</table>

**Organizational Structure and Performance**

The present research investigated the impact of organizational structure on KeNHA’s performance. The results are presented in Table 6. The findings indicate that organizational structure affected KeNHA’s performance since there is involvement of staff from all departments and levels in the process of decision making ($M = 3.81, SD = .75$); there is hierarchy and protocol of duty in KeNHA’s departments ($M = 4.22, SD = .92$); senior management delegates some decisions and allows employees to experiment with their ideas ($M = 3.76, SD = .87$); there exists formal and collective responsibility between all departmental staffs ($M = 4.09, SD = .79$); and there is a clear chain of command at KeNHA ($M = 4.34, SD = .83$).

**Table 6**

Organizational Structure and KeNHA’s Performance

<table>
<thead>
<tr>
<th>S/No.</th>
<th>STATEMENT</th>
<th>$M$</th>
<th>$SD$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>There is involvement of staff from all departments and levels in the process of decision making</td>
<td>3.81</td>
<td>.75</td>
</tr>
<tr>
<td>2.</td>
<td>There is hierarchy and protocol of duty in my department</td>
<td>4.22</td>
<td>.92</td>
</tr>
<tr>
<td>3.</td>
<td>Senior management delegates some decisions and allows employees to experiment with their ideas</td>
<td>3.76</td>
<td>.87</td>
</tr>
<tr>
<td>4.</td>
<td>There exists formal and collective responsibility between all departmental staffs</td>
<td>4.09</td>
<td>.79</td>
</tr>
<tr>
<td>5.</td>
<td>The chain of command is clear in my agency</td>
<td>4.34</td>
<td>.83</td>
</tr>
</tbody>
</table>

**Inferential Statistics**

The research determined the effect of five strategic implementation actions on KeNHA’s performance and conducted a multiple regression analysis to dissect the linkages underpinning the five independent and dependent variables (firm performance). Table 7 is a model summary of the regression analysis for the present study. In Table 7, the coefficient determination $R^2 = .67$, is equivalent to 67.9%. This indicates that strategic leadership adoption, resource allocation, communication system, organizational culture, and organizational structure collectively influence KeNHA’s performance by 67.9%. The strategic implementation actions were the independent variables, while KeNHA’s performance was the dependent variable. As shown in Table 7, the $p$-value of .000 is less than .05, indicating significance at a 95% level of confidence.

**Table 7**

Regression Analysis Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>$R$</th>
<th>$R^2$</th>
<th>Adjusted $R^2$</th>
<th>Std. Error of the Estimate</th>
<th>$R^2$ change</th>
<th>$F$ change</th>
<th>$DF1$</th>
<th>$DF2$</th>
<th>Sig. $F$ change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.92(a)</td>
<td>.67</td>
<td>.65</td>
<td>.48</td>
<td>.67</td>
<td>1.24</td>
<td>4</td>
<td>96</td>
<td>.000</td>
</tr>
</tbody>
</table>

**Note.** Source: Field Data June 2023
Table 8 shows that there is a significant relationship \((p=0.000)\) between strategy implementation and performance of KeNHA.

### Table 8

**Summary of Analysis of Variance**

<table>
<thead>
<tr>
<th>Sum of squares</th>
<th>df</th>
<th>Mean square</th>
<th>(F)</th>
<th>(p)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>0.68</td>
<td>4</td>
<td>.25</td>
<td>.43</td>
</tr>
<tr>
<td>Residual</td>
<td>18.23</td>
<td>74</td>
<td>.87</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>18.91</td>
<td>78</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note. Source: Field Data June 2023*

The research used the following regression model \(Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \varepsilon\)

Where:
- \(y\) = dependent variable value (Firm performance)
- \(\beta_0\) = Constant value \(\beta_1\) - \(n\) are the regression of beta coefficient
- \(X_1\) = Leadership strategic implementation
- \(X_2\) = Resource allocation strategic implementation
- \(X_3\) = Communication system adoption strategic implementation
- \(X_4\) = Organizational culture
- \(X_5\) = Organizational structure
- \(\varepsilon\) = The Error term

Substituting with the above figures, the regression model is as follows:

\(Y = 0.94 + 0.08X_1 + 0.07X_2 + 0.06X_3 + 0.05X_4 + 0.04X_5 + 0.13\)

The above regression model suggests that all five independent variables influenced KeNHA’s performance but to varying extents (see Table 9). Strategic leadership adoption had the biggest impact on performance at .08. One unit change in strategic leadership action caused a corresponding change in KeNHA’s performance by .08 units. Also, one unit change in resource allocation caused a corresponding change in KeNHA’s performance by .07 units. Similarly, one unit change in communication system adoption, organizational culture, and organizational structure caused a corresponding change in KeNHA’s performance by .06, .05, and .04 units, respectively. The organizational structure had the least impact on KeNHA’s performance.

### Table 9

**Regression Coefficients**

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized coefficients</th>
<th>Standardized coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(B)</td>
<td>Std. Error</td>
</tr>
<tr>
<td>1. Constant</td>
<td>.94</td>
<td>.13</td>
</tr>
<tr>
<td>Strategic leadership</td>
<td>.08</td>
<td>.03</td>
</tr>
<tr>
<td>Resource allocation</td>
<td>.07</td>
<td>.02</td>
</tr>
<tr>
<td>Communication system</td>
<td>.06</td>
<td>.04</td>
</tr>
<tr>
<td>Organizational culture</td>
<td>.05</td>
<td>.02</td>
</tr>
<tr>
<td>Organizational structure</td>
<td>.04</td>
<td>.03</td>
</tr>
</tbody>
</table>

*Note. Source: Field Data June 2023*

**Discussion**

### Strategic Leadership Adoption and Performance

The aggregate mean shows that strategic leadership adoption influences the performance of KeNHA. This is because strategic leadership ensures there are clear objectives that guide the organization’s operations and fosters collaboration and accountability among employees
(Khaleji, 2019). The participants partially agree that leadership has set a vision for the future of the firm, which then improves its performance \((M = 3.62, SD = .76)\). The findings mirror those of Covin and Slevin (2017) who underscored the role of strategic leadership in firm performance. Similarly, the present study appreciated the role of employee motivation in the overall firm performance. The participants partially agree that the leadership rewards employees based on their performance, which improves productivity strategy \((M = 3.05, SD = .82)\). Besides setting the mission and vision for the organization, as well as clear objectives and tactics, the management should develop robust employee engagement and rewards. However, unlike Covin and Slevin (2017), the present study also considered other aspects of strategic leadership including strategic planning and decision-making.

Additionally, the participants agree that there is robust stakeholder involvement in strategic planning and decision-making at KeNHA, which influences the organization’s performance \((M = 3.86, SD = .74)\). The participants also noted that strategic leadership practices at KeNHA raised employee morale and productivity through the robust engagement of employees in different levels of decision-making. The findings agree with Flowers (2018), who showed the significance of leadership in firm performance, particularly the involvement of key stakeholders in decision-making. Moreover, the participants agreed that there are clear goals, deliverables, and performance indicators for every road project at KeNHA \((M = 3.98, SD = .78)\). Setting clear goals and deliverables improved performance because employees understood their expectations at work, thus enhancing a sense of accountability. This was consistent with Gupta et al. (2018), who showed that the leader’s competence is directly proportional to performance.

Lastly, the participants agreed that resources at KeNHA were effectively utilized to achieve resources, and that influenced performance \((M = 3.74, SD = .81)\). Essentially, the participants contended that effective utilization of resources ensured minimal wastage of the resources allocated to the management of roads, thereby maintaining road quality. The findings confirm that Khaleji (2019) found that strategic leadership positively affects firm performance. Although the present study contends that strategic leadership adoption independently influences firm performance by .08 units, the study acknowledges that the availability of adequate resources is paramount.

**Resource Allocation and Performance**

The aggregate mean suggests the participants’ partial agreement that resource allocation influences firm performance \((M = 3.83)\). The allocation of resources should be conducted during the strategy formulation and planning process to ensure the successful implementation of the developed strategies (Khaleji, 2019). The participants also agreed that every department has adequate technological resources to support dischargeof their mandates \((M = 3.85, SD = .82)\). The availability of resources ensures that the specific tasks appertaining to every project are implemented according to the set goals and standards. The findings concur with Feng et al. (2015), who showed that adequate resource allocation was critical in strategy implementation to enable the organization to achieve its goals. The participants also agree that KeNHA has enough staff in every department and that the members of staff are regularly trained to improve their skills and competencies at \((M = 4.14, SD = .86)\) and \((M = 3.79, SD = .79)\), respectively. Human resources are central to the success of any organization since it is the employees’ input that drives the day-to-day operations of an organization and enables it to actualize its vision
The present study confirms the findings of Buuni et al. (2015), who underscored the importance of human resources in firm performance.

Moreover, the participants partially agreed that KeNHA makes adequate budgetary allocations for strategic planning and implementation to improve the quality of roads and its projects ($M = 3.67, SD = .66$). The allocation of adequate budgets for strategic planning processes enables the successful execution of the projects as it ensures there are resources to meet every project goal. Joseph and Kibera (2019) also present a similar picture as the present study by showing that resource allocation to the functions of various departments allows the departments to function effectively, hence improving firm performance. The study also found that every department has adequate materials and equipment to guarantee project completion and quality, which has an impact on KENHA’s performance ($M = 3.70, SD = .90$). As Joseph and Kibera (2019) found, it would be difficult for the department to fulfill its objectives without adequate resources.

**Communication System Adoption and Performance**

The participants contended that communication system adoption at KeNHA facilitated effective communication among various stakeholders, enhancing clarity of objectives, positive interpersonal relationships, feedback sharing, and implementing a collaborative framework. The study concurs with Runge et al. (2018), who showed that robust communication systems influence positive behavior within the organization.

Also, the participants were in agreement that the communication system channels adopted in this agency enhance the attainment of its goals ($M = 3.95, SD = .89$). This is because communication systems influence the sharing of information, knowledge management, clarity of objectives, collaboration, and coordination among employees. The present findings agree with Udegbe et al. (2012), who showed that communication systems helped organizations to maintain strategic momentum and help attain their strategic objectives.

Additionally, the participants agree that the management shares the organization’s vision from time to time to enable the attainment of project goals and the pursuit of deliberate programs to foster management and employee relationships by explaining the agency’s objectives and goals at ($M = 4.27, SD = .86$); and ($M = 3.91, SD = .85$) respectively. The sharing of the organization’s vision ensures that all stakeholders of the organization remain on the same page, thus enhancing the achievement of their shared goals (Covin & Slevin, 2017). The findings also agree with Flowers (2018), who showed the significance of leadership in firm performance, particularly the involvement of key stakeholders in decision-making.

Lastly, the participants strongly agree that giving feedback to employees, whether positive or negative, is the culture of this agency ($M = 4.13, SD = .81$). The management of different departments at KeNHA gave employees timely feedback on different aspects of their
performance, which enabled them to remedy their mistakes. The study agrees with Mutisya (2016), who underscored the role of feedback in the attainment of the organization’s objectives.

**Organizational Culture and Performance**

The participants noted that the shared values, beliefs, norms, and practices at KeNHA inspired an ethical climate that influenced performance ($M = 3.90, SD = .83$). They also noted that the organizational culture prioritized employee welfare rather than results, and this inspired creativity, innovation, and commitment among employees. The results concur with Willar et al. (2016), who underscored the importance of a people-oriented culture in the success of an organization. KeNHA has a people-centered culture as it prioritizes employee welfare, thereby enhancing firm performance. The participants also agree that KeNHA’s mission and vision perfectly align with its values ($M = 3.48, SD = .76$). This is attributed to the strategic leadership practices at the organization. It is the role of the organization’s leadership to align its strategic planning practices with its values to improve the quality of performance outcomes (Covin & Slevin, 2017). Harmony between the mission, vision, and values is necessary to ensure the organization’s stakeholders understand and discharge their mandate effectively.

Furthermore, the participants agreed that KeNHA’s culture is people-centered to improve employee productivity and achieve project goals; KeNHA’s values are entrenched in every department; and that innovation and creativity are encouraged among staff at means of 3.19, 3.56, and 3.94, respectively. KeNHA’s culture has encouraged a climate of positive interpersonal relationships, freedom to experiment with new ideas, and accommodating the diverse values, beliefs, and interests of the firm’s workforce. The findings agree with Lee and Kim (2017), who showed the role of organizational culture in fostering strategic relationships and firm performance.

Lastly, the aggregate mean shows that organizational culture affects firm performance at a mean of 3.61. This confirms the findings of an earlier study by Okumu (2003), who also found a positive correlation between organizational culture and firm performance.

**Organizational Structure and Performance**

The aggregate mean indicated that participants strongly agree that organizational structure influenced KeNHA’s performance ($M = 4.04, SD = .83$). The participants noted that KeNHA has a management structure that emphasizes hierarchy, which ensures there are clear duties and responsibilities for everyone. The hierarchical management structure also ensures there is no duplication of tasks in the organization, which improves efficiency and performance (Muriu, 2019). Besides, staff from all departments and levels are involved in decision-making ($M = 3.81, SD = .75$). The involvement of stakeholders in decision-making enables the implementation of quality strategies because employees with a wide range of expertise deliberate on them. The research concurs with Maduenyi et al. (2015), who contend that a clear chain of command is associated with quality performance outcomes.

Moreover, the participants strongly agreed that there was a hierarchy and protocol of duty in KeNHA’s departments ($M = 4.22, SD = .92$). The hierarchy and protocol clarified duties, improved decision-making, and minimized conflicts and confusion, thus improving performance. The findings agree with Dai et al. (2017), who showed that organizational structures gave organizations a sense of stability and predictability, which led to quality
performance outcomes. However, it is noteworthy that the top-down decision-making structure tends to be bureaucratic as it impedes horizontal communication in the various units of an organization (Dai et al., 2017). This was also true for KeNHA, as the participants observed that the bureaucratic nature of the management structure slowed down decision-making and information-sharing processes.

Additionally, the participants strongly agreed that there was a clear chain of command at KeNHA and that formal and collective responsibility existed among all departmental staff ($M = 4.34, SD = .83$); and ($M = 4.09, SD = .79$), respectively. The clear chain of command and the formal as well as collective responsibility fostered coordination in different departments of the firm. This resonates powerfully with Okendo (2018), who underscored the importance of formal structures in improving efficiency and firm performance. Lastly, the employees agreed that senior management at KeNHA delegates some decisions and allows employees to experiment with their ideas ($M = 3.76, SD = .87$). The organizational structure at KeNHA allowed the management to delegate some decisions to employees at lower levels of management, which boosted their skills and leadership acumen. This is consistent with Muriu (2019), who also found a positive correlation between organizational structure and firm performance.

The regression model suggests that strategic leadership adoption, resource allocation, communication system, organizational culture, and organizational structure influenced KeNHA’s performance but to varying extents. The regression coefficients of .08, .07, .06, .05, and .04 were all significant at $p < .05$. Strategic leadership adoption had the biggest impact on performance at .08. The current study agrees with Lee and Welliver (2018), who showed that the adoption of strategic leadership practices significantly improves organizational performance. The success of the firm’s strategic leadership practices depends on its management’s competency (Gupta et al., 2018). This implies that KeNHA has competent management that is responsible for the success of its strategic leadership practices.

Furthermore, one unit change in resource allocation caused a corresponding change in KeNHA’s performance by .07 units. The present study agrees with Khaleji (2019), who found that resource allocation has a significant and positive impact on firm performance. However, the research only focused on human resources. Note that while Khaleji (2019) showed that adequate resource availability was crucial in firm performance, the organization ought to pursue effective strategic leadership practices, a finding that was consistent with the current study. Moreover, one unit change in communication system adoption caused a corresponding change in KeNHA’s performance by .06 units. The organizational structure had the least impact on KeNHA’s performance. The present study confirms the findings of Obeidat et al. (2017), who found a positive correlation between communication systems and firm performance.

Moreover, organizational structure and culture were found to have the least impact on firm performance by .04 and .05 units, respectively, in the present study. This agrees with El Talla et al. (2018), who found a significantly positive correlation between organizational structure and firm performance. The same was true for Okendo (2018), who found that organizational structure improved task coordination, formalization, specialization, and overall performance of the organization. Lastly, regarding organizational culture, the current study confirms the findings of Lee and Kim (2017), who showed a positive correlation between organizational culture and performance. Also, the present study supports Willar et al. (2016), who showed
that organizational culture and the attitude employees have towards firms can enable the easy implementation of strategy and adaptation to the ever-changing environments in businesses. The people-oriented culture at KeNHA enables employees to adapt to changes in the external environment.

**Conclusion**

The research concluded that strategic leadership positively influenced KeNHA’s performance. The results were statistically significant. Strategic leadership practices, such as the setting of clear goals, formulation and implementation of strategies, enhanced efficiency in decision-making, maintained strategic momentum, raised employee morale, and boosted overall productivity. However, although KeNHA rewards employees based on their performance, optimization of the firm’s reward system is yet to be achieved. The research also concluded that resource allocation positively influenced KeNHA’s performance. The study found that KeNHA allocated adequate resources to its projects, which enhanced project quality and overall performance outcomes. Employees were also trained regularly to build their capacities in different projects, thus improving project quality.

Further, the research showed that communication system adoption had a positive and significant impact on the firm’s performance. Effective communication systems at KeNHA were found to foster information sharing, decision-making processes, and stakeholder engagement, thus improving goal and objective attainment. Additionally, the research found that organizational culture had a significantly positive impact on firm performance. KeNHA’s culture was employee-oriented, which boosted employee motivation and productivity. The culture also strengthened the ethical environment at the workplace. Lastly, the study concluded that organizational structure positively and significantly impacted firm performance. The hierarchical management structure helped maintain order and division of tasks in the firm, fostering coordination across departments and clarity of responsibilities and objectives.

**Policy Recommendations**

KeNHA’s Director General, as well as the heads of the Directorates of Highway Planning and Design and Road Asset and Corridor Management, could prioritize strategic leadership practices in strategy implementation to improve road quality and project completion outcomes. The recommendation is informed by the study’s finding on the first objective that strategic leadership adoption had the greatest impact on the firm’s performance. The present study showed that one unit change in strategic leadership adoption affected KeNHA’s performance by the biggest magnitude. The organization could revamp its mission and vision-setting processes, employee motivation, and stakeholder engagement in strategic planning. Strategic leadership practices should be entrenched in every department so that project managers develop clear visions for every project, motivate stakeholders, ensure projects are completed on time, and attain the desired quality.

Secondly, KeNHA’s Human Resource Management (HRM) department could revamp the firm’s reward management system to raise morale and satisfy the diverse interests and needs of the firm’s workforce. The study’s finding informs that employee motivation boosts performance on the first objective. Although KeNHA rewards employees based on their performance, the organization grapples with a high employee turnover rate. A reward...
A management system that considers multiple motivational factors could bolster employee retention rate and overall organizational performance.

Thirdly, KeNHA’s Director General could adopt a matrix organizational structure where teams in various departments report to different leaders so that there are no particular centers of power. This recommendation is based on the study’s finding on its fifth objective that organizational structure positively impacts performance. A matrix organizational structure could foster collaboration and knowledge sharing, thereby improving performance. It could also eliminate bureaucracies and delays in decision-making, thereby improving project completion outcomes. Lastly, the Directorates and other key policy decision-making organs of road management agencies could pursue robust strategic implementation practices to meet their targets. This is informed by the study’s overall conclusion that strategy implementation account has a positive and significant impact on firm performance. Focusing on strategy implementation practices could help road management agencies including KeNHA, to address the perennial challenge of failing to attain their strategic objectives.

Limitations and Future Research Direction
The current study addressed strategic management aspects within KeNHA’s internal environment. Thus, future studies could consider exploring strategic management aspects in KeNHA’s external environment and their effect on performance. Such factors may include political, environmental, social, economic, technological, and legal aspects of the external environment in which road management agencies operate. Additionally, the present study found that KeNHA struggles to attain its strategic objectives including the completion of projects in time and maintaining road quality standards. This exhorts further studies on the challenges that KeNHA and other road management agencies face in strategy implementation, as well as the measures to counter those challenges. Such studies may yield findings that may enable KeNHA and other organizations to improve their strategy implementation processes.

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