INFLUENCE OF STRATEGY IMPLEMENTATION ON PERFORMANCE OF WATER SERVICE PROVIDERS IN THE LOWER-EASTERN COUNTIES OF KENYA

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Abstract: Water scarcity continues to constrain socioeconomic development in Lower-Eastern Kenya, with water service providers struggling to address high Non-Revenue Water (NRW) levels, weak coverage expansion, and financial sustainability concerns. This study examined the influence of strategy implementation on the performance of licensed water service providers in the region. Grounded in the Resource-Based View (RBV), which emphasizes effective deployment of valuable, rare, inimitable, and non-substitutable resources for competitive advantage, the study assessed how strategic processes translate into organizational outcomes. A positivist philosophy and descriptive survey design guided the research. A stratified purposive sample of 183 respondents was drawn from a population of 758 staff across ten providers. Data were collected through structured questionnaires, pre-tested for reliability, and analyzed using SPSS Version 21. Descriptive statistics established existing practices, while regression analysis tested the hypothesized relationship. Findings revealed strong leadership engagement and organizational capacity but highlighted gaps in employee support, particularly inadequate training, motivation, and resource provision. Inferential results demonstrated a significant positive relationship between strategy implementation and performance ($R = 0.526$, $R^2 = 0.277$, $\beta = 0.491$, $p < 0.001$). This indicates that strategy implementation explains 27.7% of performance variation, confirming that providers with robust implementation processes achieve superior efficiency, customer satisfaction, and financial outcomes. The study concludes that strategy implementation is a critical driver of performance but must be complemented by broader reforms and capacity-building initiatives. It recommends strengthening employee support systems, enhancing monitoring and evaluation mechanisms, building implementation capabilities across organizational levels, prioritizing financial sustainability, and investing in research and innovation to foster adaptive strategies for long-term water service improvement.

Key Words: Strategy Implementation, Organizational Performance, Water Service Providers, Eastern Counties of Kenya

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1.0 INTRODUCTION

A. Background of the Study

The critical role of water service providers centers on effectively distributing water from sources to ultimate usage points. Good performance of these providers is measured by their ability to supply reliable, adequate, quality, and affordable water to users. In pursuing effective water demand fulfillment, these organizations face numerous challenges. A frequently overlooked challenge is that global sources of potable water remain limited, with availability further reduced through quality degradation by chemical and microbial pollutants (Botkin & Keller, 2011). Water shortage becomes aggravated by distribution wastage, which remains within the control of water service providers.

In Kenya specifically, Non-Revenue Water (NRW) exceeds 45% (WASREB, 2022), resulting in annual revenue losses of approximately Kshs15.8 billion (Mawia, 2021). Comparatively, global water loss stands at 35% (Nono et al., 2024). This disparity highlights significant inefficiencies in Kenya's water distribution systems. Agricultural productivity, which forms the bedrock of Kenya's economy, remains low due to inadequate water supply from service providers. Despite current unmet water needs, demand continues increasing as Kenya strives to become a newly-industrializing middle-income country under Vision 2030. Effective implementation of water resource management strategies could improve water supply services in Kenya. Countries like Israel, as noted by the Organisation for Economic Co-operation and Development (OECD, 2023), and Saudi Arabia have virtually satisfied their populations despite limited water sources through effective water resource management strategy implementation.

Comparatively, South African populations receive water supply below 1000m^3 per capita annually (Molobela, 2011). Kenya's water supply ranks much lower, with the country categorized among water-scarce nations providing below 1000 m^3 per person annually (United Nations Environment Programme, 2005). This classification underscores the urgent need for improved water management strategies.

Overregulation of water sectors represents a common global phenomenon (Gasson et al., 2009). In Africa particularly, water utilities maintain limited control over their operational scope (Mbuvi, 2012). Most utilities operate within predefined licenses and jurisdictions, serving diverse geographic areas and living standards driven primarily by political interests (Nono et al., 2024). Water sources in Lower-Eastern Kenya primarily consist of rivers and springs distributed unevenly across the region. However, rainwater, which represents a more dependable quality source (Gakungu, 2013; Patil, 2006; World Health Organization, 2020), remains underutilized and exploited in minimal quantities. This suggests that factors beyond water source availability account for poor water service provider performance in Lower-Eastern Kenya. Weak water service provider performance affects the entire country, primarily due to high NRW rates, with Nairobi experiencing above 47% (The World Bank Group, 2021). Poor water coverage in Kenya stands at 60% (WASREB, 2022), significantly lower compared to

Latin American cities such as Lima (91%), Panama (92%), Quito (97%), and San José (100%) (The World Bank Group, 2021).

Strategy Implementation

Strategy implementation refers to the process of translating formulated strategies into actionable programs, structures, and activities that enable organizations to achieve their goals (Pearce & Robinson, 2015). It encompasses allocating resources, defining roles, establishing operational procedures, and equipping personnel with the requisite skills and tools for effective execution (Kaplan & Norton, 2004). In the context of water service providers in Lower-Eastern Kenya, successful strategy implementation requires mobilizing both human and technical resources to reduce inefficiencies, particularly Non-Revenue Water (NRW), and to improve water service delivery. Engaging employees through training, motivation, and participatory management enhances the likelihood of effective strategy execution (Okumus, 2003). Additionally, alignment between organizational structure, leadership, and operational processes is critical to ensure that strategic initiatives directly translate into improved service coverage, quality, and reliability, thereby enhancing the overall performance of water service providers (Hrebiniak, 2005).

Performance and its Measurement

Organizational performance constitutes a multidimensional organizational aspect. Performance definition remains fluid (Ogolla, 2020), but in business contexts, performance represents a comparative measure of organizational financial or non-financial success. Financial success is measured through profit, Return on Assets (ROA), and Return on Equity (ROE) realization (Ngure et al., 2018). Non-financial success relies on market share, customer base, satisfaction, or loyalty metrics that are predominantly subjective and qualitative (Kairu, 2022). Financial measurements are both inward-looking and unidimensional using longitudinal data, and outward-looking using cross-sectional data for benchmarking with other firms to evaluate competitiveness. The balanced scorecard represents a multidimensional measuring tool adopted in this study because it facilitates holistic performance measurements (Senaji & Ogolla, 2017; Njeru, 2015).

Water Demand

Water demand represents the quantified need for water across domestic, agricultural, and industrial sectors, influenced by population growth, economic activities, and seasonal variability (Gleick, 2018). Globally, agriculture accounts for approximately 50% of water consumption, industrial activities 40%, and domestic use 10%, though these ratios vary regionally depending on economic and climatic factors (Molobela, 2011). In Lower-Eastern Kenya, water demand frequently outstrips supply due to limited infrastructure, uneven distribution of water sources, and high levels of Non-Revenue Water (WASREB, 2022). Rising population and urbanization exacerbate this gap, creating heightened pressure on water service providers to deliver reliable and sufficient water (UNEP, 2020). Additionally, water contamination and inefficient utilization further constrain availability, undermining socioeconomic activities such as irrigation-dependent agriculture, industrial operations, and

household consumption (Patil, 2006). Efficient demand management strategies, therefore, are critical for balancing available resources with user requirements.

B. Statement of the Problem

In Lower-Eastern Kenya, water scarcity significantly impedes economic development, particularly in agriculture, which is heavily dependent on reliable water access (Atheru et al., 2021). Despite Kenya's growing demand for water, Non-Revenue Water (NRW) exceeds 45%, reflecting inefficiencies in distribution and management by water service providers (WASREB, 2022). These inefficiencies not only result in financial losses of approximately Kshs15.8 billion annually (Mawia, 2021) but also compromise the equitable and consistent provision of water to domestic, agricultural, and industrial users. Poor strategy implementation further exacerbates service gaps, as providers struggle to align operational activities, human resources, and infrastructure investment with water supply objectives (Hrebiniak, 2005). Consequently, understanding how strategy implementation influences performance is critical to improving water coverage, reducing wastage, and enhancing service reliability. Addressing these gaps is essential to support Kenya's Vision 2030 aspirations and ensure sustainable access to water in the Lower-Eastern counties.

C. Purpose of the Study

The study purpose was to determine strategy implementation influence on water service provider performance in Lower-Eastern counties of Kenya.

D. Research Hypothesis

H_{01}: Strategy Implementation does not significantly influence performance of water service providers in Lower-Eastern, Kenya.

2.0 LITERATURE REVIEW

A. Theoretical Review

The Resource-Based View (RBV), propounded by Penrose and further developed by Barney in 1991 (as cited by Riungu, 2018; Keroti, 2022), serves as the theoretical foundation for this study. RBV's standpoint maintains that firms are internally heterogeneous and differ fundamentally because each organization possesses distinctive resource bundles including skills, capabilities, and tangible assets. Strategic application of these resources distinguishes each firm's performance level (McGee et al., 2010).

The theory argues that only resources that are valuable, rare, inimitable, and non-substitutable (VRIN) can guarantee firm competitiveness (Mbithi, 2024) and sustainable performance (Nyagaki et al., 2021). Water as a natural resource holds VRIN characteristics but remains generally available to regional entities almost equally. Organizations can gain competitive advantage from water through effective utilization of these characteristics.

RBV relevance to this study lies in its emphasis on strategic resource deployment for competitive advantage. Water service providers in Lower-Eastern Kenya possess varying

resource configurations, and their strategic implementation capabilities determine performance differentiation. The theory provides a framework for understanding how effective strategy implementation transforms organizational resources into superior performance outcomes, particularly relevant in the water service sector where resource optimization directly impacts service delivery effectiveness.

B. Empirical Review

Strategy Implementation and Organizational Performance

Recent research demonstrates strong relationships between strategy implementation practices and organizational performance across various sectors. Kibet et al. (2023) examined organizational innovation effects on small and medium enterprise performance in Laikipia County, finding that strategic implementation of innovative practices significantly improved operational efficiency and customer satisfaction. The study revealed that organizations with structured implementation processes achieved 34% higher performance scores compared to those with ad hoc approaches.

Mbithi et al. (2024) investigated managerial capabilities, sponsorship, and performance relationships in private chartered universities, finding that effective strategy implementation mediated the relationship between resources and performance outcomes. Their findings indicated that institutions with comprehensive implementation frameworks demonstrated superior performance across financial and non-financial metrics, supporting the theoretical foundation that strategic resource deployment drives competitive advantage.

Shaban (2021) analyzed strategic management practices and National Government Constituency Development Fund project performance in Taveta Constituency, revealing that projects with structured implementation processes achieved 78% success rates compared to 43% for those without systematic approaches. The study emphasized the importance of stakeholder engagement, resource allocation, and monitoring mechanisms in successful strategy implementation.

Kihara (2016) examined strategy implementation influence on manufacturing small and medium firm performance, finding significant positive relationships between implementation practices and organizational outcomes. The research demonstrated that firms with comprehensive implementation strategies achieved higher profitability, market share growth, and operational efficiency. These findings provide empirical support for the theoretical proposition that effective strategy implementation drives superior performance.

Water Sector Performance Studies

Mawia and Kalunda (2021) investigated utility efficiency influence on water service provider financial sustainability, revealing that efficient implementation of operational strategies significantly improved financial performance indicators. Their study found that utilities with structured implementation processes reduced NRW by an average of 23% and improved revenue collection by 31%. The research landscape reveals consistent evidence supporting strategy implementation importance across sectors, with water utilities showing particular

sensitivity to implementation effectiveness. However, limited research specifically addresses strategy implementation influences on water service provider performance in Lower-Eastern Kenya, representing a significant gap this study addresses.

3.0 RESEARCH METHODOLOGY

This study adopted a positivist philosophy, assuming that reality exists objectively and can be measured independently of researcher bias (Creswell & Creswell, 2018). Guided by this approach, the research aimed to identify causal relationships using empirical methods. A descriptive survey design was employed, integrating a mixed-methods approach combining quantitative closed-ended questionnaires with qualitative open-ended questions. Data were collected through a cross-sectional survey conducted over two months (February–March 2025). The target population comprised 758 staff across ten licensed water service providers in Lower-Eastern Kenya. Due to practical constraints, stratified purposive sampling was used, yielding a sample size of 183 respondents determined by Yamane's formula (Kothari & Garg, 2014). Proportionate sampling ensured representation across top management, middle management, and operational staff. Data were collected via self-administered questionnaires following approvals from Kenya Methodist University and NACOSTI. Pre-testing of 10 questionnaires (3.8% of the sample) confirmed validity and reliability, with Cronbach's Alpha values ranging from 0.73 to 0.86. Data analysis was conducted using SPSS Version 21, employing descriptive and inferential statistics, including multiple regression across three models to examine relationships between independent and dependent variables.

4.0 RESEARCH FINDINGS AND DISCUSSION

A. Response Rate

The study achieved 154 completed questionnaires out of 183 distributed, resulting in an overall response rate of 84.2% based on questionnaires issued, and 58.6% relative to the intended sample size.

Table 1: Response Rate

Water Service Provider	Target Sample	Questionnaires Issued	Responses Received	Response Rate (%)	Contribution to Overall (%)
Provider A	35	23	21	91.3	13.6
Provider B	28	18	17	94.4	11.0
Provider C	42	25	20	80.0	13.0
Provider D	31	19	15	78.9	9.7
Provider E	25	15	12	80.0	7.8
Provider F	38	22	18	81.8	11.7
Provider G	29	17	14	82.4	9.1
Provider H	22	14	12	85.7	7.8
Provider I	26	16	13	81.3	8.4
Provider J	17	14	12	85.7	7.8
Total	**263**	**183**	**154**	**84.2**	**100.0**

Source: Field Data (2025)

Response rates varied across the ten water service providers, ranging from 78.9% to 94.4%, influenced by geographical spread and staff concentration at headquarters. Higher response rates were recorded in organizations with centrally located staff, while lower rates occurred where respondents were dispersed across distant regions. The achieved overall response rate is considered excellent; Mugenda and Mugenda (2003) suggest rates above 50% are adequate, above 60% are good, and over 70% are very good. Kothari and Garg (2014) further note that rates exceeding 70% are excellent for survey-based research.

B. Descriptive Analysis

Descriptive statistics summarizing population characteristics in terms of totals, frequencies, modes, median, mean, and standard deviations were analyzed. Data were summarized from respondent returns using a five-point Likert scale spanning from 1 to 5, where Strongly Disagree (SD) was represented by 1 and Strongly Agree (SA) by 5. Continuous grouped scales were created: Strongly Disagree (1.0-1.8), Disagree (1.8-2.6), Neutral (2.6-3.4), Agree (3.4-4.2), and Strongly Agree (4.2-5.0).

Descriptive Statistics on Strategy Implementation

The study sought to determine strategy implementation influence on water service provider performance in Lower-Eastern counties of Kenya, with results presented in Table 2.

Table 2: Descriptive Statistics on Strategy Implementation

Statement	N	Min	Max	Mean	S.D
Organization's leaders meet regularly to review and steer ongoing activities	154	2	5	4.00	0.741
The organization matches existing structure with new strategy being implemented	154	1	5	3.71	0.830
The organization doesn't keep vacant positions for long	154	1	5	3.40	1.087
The organization has a clear reporting authority and process	154	1	5	3.88	0.956
The organization has adequate knowledge, experience and skills to do its job	154	1	5	4.04	0.899
There is good communication to all staff	154	1	5	3.69	1.031
A central command unit coordinates strategy implementation	154	1	5	3.60	0.866
The organization works within its rules, regulations and policies	154	1	5	3.99	0.820
Management provides adequate resources to do every job	154	1	5	3.55	0.977
There is adequate supervision of all activities in the organization	154	1	5	3.97	0.859
The organization encourages teamwork	154	1	5	4.21	0.868
The organization has adequate tools, equipment and technology to get work done	154	1	5	3.36	1.112
Staff are trained regularly	154	1	5	3.15	1.148
Employees are rewarded often for good work	154	1	5	2.95	1.262

Source: Field Data (2025)

The analysis reveals that 11 of 14 statements received positive responses with mean scores exceeding 3.4, indicating that strategy implementation was emphasized in organizations. The highest-rated aspects included teamwork encouragement (M = 4.21, SD = 0.868), organizational knowledge and skills adequacy (M = 4.04, SD = 0.899), and regular leadership meetings (M = 4.00, SD = 0.741).

However, the three lowest-rated statements concerned employee equipment, training, and motivation, with means ranging from 2.95 to 3.36. These findings suggest that while organizations embrace strategy implementation in planning processes, inadequate equipment provision, insufficient training, and low employee motivation reduce implementation effectiveness. This pattern indicates a critical gap between strategic intent and operational support mechanisms.

Descriptive Statistics on Performance

The study investigated water service provider performance in Lower-Eastern counties of Kenya. The results are displayed in Table 3 below.

Table 3: Descriptive Statistics on Performance

Statement	N	Min	Max	Mean	Std. Deviation
In the last five years, customer feedback has been positive and customers are satisfied	154	1	5	3.36	0.906
Customer complaints have reduced in the last five years	154	1	5	3.59	0.933
In the last five years, number of customers has increased	154	1	5	4.08	0.921
More customers have been connected as planned	154	1	5	3.86	0.871
The organization has been making good profits	154	1	5	3.07	1.109
Revenue collected has increased	154	1	5	3.47	1.017
Audited accounts have shown high ROA	154	1	5	3.15	0.975
Audited accounts have shown high ROE	154	1	5	3.16	0.887
The organization finances operations from revenue collected	154	1	5	4.16	0.852
Geographical area served has expanded significantly	154	1	5	3.82	0.896
The organization finances capital expenditures without loans	154	1	5	3.09	1.157
Employee base has increased	154	1	5	3.47	1.024
Latest equipment and technology acquired	154	1	5	3.25	1.056
Latest technology has improved customer service	154	1	5	3.35	1.013
Research funds have been increasing	154	1	5	2.90	1.074
Water supply sources have been diversified	154	1	5	3.42	0.995
Water products and uses have been diversified	154	1	5	3.21	1.095

Source: Field Data (2025)

Performance results reveal mixed outcomes across different dimensions. Strongest performance indicators included operational self-financing (M = 4.16, SD = 0.852) and customer base growth (M = 4.08, SD = 0.921), suggesting basic operational sustainability and market expansion.

However, research investment (M = 2.90, SD = 1.074), profitability (M = 3.07, SD = 1.109), and capital expenditure financing capability (M = 3.09, SD = 1.157) showed concerning low levels. These findings indicate that while water service providers maintain basic operational functions and achieve some growth metrics, they struggle with strategic investments, profitability, and financial independence for capital improvements. This pattern suggests limited strategic implementation effectiveness in translating operational activities into comprehensive performance outcomes.

C. Inferential Analysis

This section presents inferential analysis determining relationships between strategy implementation and performance outcomes. Statistical methods including regression analysis provide insights into variable strength and significance affecting water service provider performance.

Model Summary

Table 4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.526[a]	.277	.272	.50370

a. Predictors: (Constant), Strategy Implementation
Source: Field Data (2025)

The correlation coefficient (R = 0.526) indicates a moderate positive relationship between strategy implementation and organizational performance. The coefficient of determination (R^2 = 0.277) shows that 27.7% of performance variation can be explained by strategy implementation. The adjusted R^2 (0.272) accounts for predictor numbers and confirms reasonable model fit. The standard error (0.504) suggests that observed value deviations from predicted values are relatively small.

ANOVA

Table 5: ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	14.769	1	14.769	58.213	.000[b]
Residual	38.564	152	.254		
Total	53.333	153			

a. Dependent Variable: Performance
b.Predictors: (Constant), Strategy Implementation
Source: Field Data (2025)

ANOVA results indicate statistical significance (F = 58.213, $p < 0.001$), demonstrating that strategy implementation has significant effects on organizational performance. The high F-value and significance level provide strong evidence supporting the relationship between variables.

Table 6: Beta Coefficients for Strategy Implementation

Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.

		B	Std. Error	Beta		
1	(Constant)	1.631	.240		6.793	.000
	Strategy Implementation	.491	.064	.526	7.630	.000

a. Dependent Variable: Performance

Source: Field Data (2025)

The unstandardized coefficient for strategy implementation (B = 0.491, p = 0.000) indicates that a one-unit increase in strategy implementation associates with a 0.491-unit increase in organizational performance. The corresponding t-value (t = 7.630) demonstrates statistical significance at the 0.01 level. These results confirm that strategy implementation significantly and positively predicts organizational performance.

The standardized coefficient (Beta = 0.526) indicates that strategy implementation has a strong positive influence on performance, supporting the theoretical framework that effective resource deployment through strategic implementation drives competitive advantage and superior outcomes.

5.0 SUMMARY OF THE STUDY

Analysis reveals that water service providers in Lower-Eastern Kenya demonstrate varying strategy implementation practice levels. The study found strong evidence of leadership engagement in implementation oversight (M = 4.00, SD = 0.741) and organizational capability adequacy (M = 4.04, SD = 0.899). Organizations effectively encourage teamwork (M = 4.21, SD = 0.868) and maintain regulatory compliance (M = 3.99, SD = 0.820).

However, significant limitations exist in employee support mechanisms, particularly regarding equipment provision (M = 3.36, SD = 1.112), regular training (M = 3.15, SD = 1.148), and reward systems (M = 2.95, SD = 1.262). These deficiencies represent critical implementation gaps that potentially undermine strategic effectiveness.

Regression analysis confirms that strategy implementation significantly influences performance outcomes ($\beta = 0.491$, $p < 0.001$), explaining 27.7% of performance variation. This relationship demonstrates that water service providers with comprehensive strategy implementation processes achieve superior performance across multiple dimensions. The findings support RBV theoretical foundations, emphasizing strategic resource deployment importance and capability development for competitive advantage.

6.0 CONCLUSION

The study conceded that strategy implementation plays a critical role in enhancing the performance of water service providers in Lower-Eastern Kenya. The findings revealed a strong relationship between effective strategy implementation and improved outcomes in customer service delivery, operational efficiency, and financial sustainability. Leadership commitment and organizational capacity emerged as important enablers, but inadequate investment in employee training, motivation, and resource provision limited the potential benefits of strategic initiatives. Addressing persistent challenges such as high water losses, low coverage, and weak financial sustainability requires more comprehensive and well-coordinated implementation efforts. Overall, the study concludes that strategy implementation significantly influences

organizational performance, though it must be complemented by broader reforms and capacity-building measures to ensure sustainable improvements in water service delivery.

7.0 RECOMMENDATIONS

The study recommended that water service providers should strengthen employee support systems through adequate training, provision of tools, and effective motivation schemes to enhance implementation success. Monitoring and evaluation mechanisms should be established to ensure accountability, progress tracking, and timely adjustments. Management should build implementation capabilities at all organizational levels, with emphasis on empowering middle-level managers and creating dedicated implementation structures. Financial sustainability should be prioritized by focusing on efficiency and resource optimization. Furthermore, research and innovation should be promoted to support adaptive strategies and provide long-term solutions to the complex challenges of water service provision.

8.0 AREAS FOR FURTHER RESEARCH

Future research should explore the long-term effects of strategy implementation on water service provider performance through longitudinal studies. Comparative research across utility sectors would help establish sector-specific insights. Qualitative approaches focusing on stakeholder perspectives and implementation dynamics would also complement quantitative findings and deepen understanding of strategy execution in water utilities.

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