Strategic Resource Allocation and Performance of Kisumu Water and Sewerage Company, Kenya

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ABSTRACT

Kisumu Water and Sewerage Company has consistently struggled to achieve its envisioned accepted performance range of 80-90% set by the Water Sector Regulatory Board standards, for instance, the company performance was estimated at 76% against business plan target of 80% despite having unlimited access to government subsidies, donor grants, commercial loans and enabling policy environment based on performance review of Kenya's water services sector 2017/2018. This study sought to establish the influence of strategic resource allocation on performance of KIWASCO. The study adopted a correlation research design with a sample size of 68 respondents selected through Stratified random sampling and data collected using a semi-structured questionnaire. Both descriptive and inferential statistics of correlation and regression were used. The study established a significant influence of resource allocation (p<0.001) on organizational performance at 5% level of significance. It was concluded that for desired performance of KIWASCO to be realized, effective resource allocation should be done to increase investments in infrastructural expansion and rehabilitation, wastage reduction, improved service quality, maximized consumer services and improved cash flow. The study recommends that the WASH sector reforms should prioritize resource allocation for implementation of strategies. Future research should explore the moderating role of strategic leadership in similar companies and trends across business periods within similar regulatory context.

Introduction

Globally, over 1 billion people lack access to clean drinking water leading to estimated one in every five infants' death being related to water-borne disease despite water bodies covering approximately 70% of the Earth's surface (UNICEF, 2009). Further, Over 159 million people use surface water to survive, risking water-borne illnesses (WHO, 2015). Equally, a 2014 survey of the world's 500 largest cities estimates that one in every four households is in a situation of water stress (UNICEF, 2015). Improved access to water and sanitation is fundamental to the achievement of sustainable development goals (SDGs) of healthy living and poverty eradication (UNICEF, 2015). However, access to water and sanitation for most urban and rural poor remains a challenge in developing countries (United Nations, 2020) and is expected to worsen with a global demand projection for fresh water exceeding supply by 40% in 2030 (UN, 2017).

In Sub-Saharan Africa, 43% of the urban population had access to piped water by 1990, but this had dropped to 33% by 2015 due to rapid urbanization and population growth compared to water utilities expansion (Heymans *et al.,* 2016). The same observation has been made in parts of Southeast Asia, Latin America, and the Caribbean (Heymans *et al.,* 2016). In Kenya, water access is estimated at 60% having doubled from 30% three years ago due to water sector reforms (WASREB, 2016). Though the National Water Services Strategy 2007-2015 had a target of 80% for water services in the urban setting, only 15% urban water utilities in Kenya met the set target with the rest performing poorly despite the countless interventions (World Bank, 2016). However, the government has again

affirmed commitment to Sustainable Development goal (SDG 6), with a national target of 80% coverage by 2020 and universal access coverage by 2030 (World Bank, 2016).

To achieve the SDG targets, the government of Kenya initiated water sector reforms in 2002 to ensure that water provision is reliable, financially sustainable and responsive to citizens and wastewater is collected, treated and discharged properly and the public is pleased with sufficient, convenient and safe water services (World Bank, 2016). Donors have invested billions to improve water utility performance in developing countries in terms of grants and Open Development Assistance (ODA) such as capital investments, institutional reforms, and technical assistance (World Bank, 2016). WASH comprised 57% of total ODA flows to the water sector from 1995 to 2014 (Winpenny *et al.,* 2016). While past interventions incidentally did help improve governing environments and utility management, many water utilities continue to struggle in improving service for sustainability.

Strategy implementation is an expensive venture, and its implementation requires adequate resources (Pimpong, 2016 and Mutai, 2018). Most organizations fail in strategy implementation due to limited resources. Thus, for such desired performance to be realized by KIWASCO, an effective strategy implementation that commits to increased investments for infrastructural expansion and rehabilitation, reducing wastage, improving service quality and cash flows is necessary. However, few local empirical studies have explored the role of strategic resource allocation on performance of water utilities in Kenya. This study therefore sought to establish the role of strategy implementation on organizational performance in water service companies like KIWASCO in Kisumu, Kenya.

This study is significant to many water and sanitation service companies in Kenya that are mandated to supply quality water across the rural and urban areas but are struggling in reaching the regulatory set targets. The study is useful to policy makers in the government since recommendations can be implemented through policy frameworks. The findings of the study might be of significance to the county government water resource management officials and the civil society organizations by equipping them with facts and knowledge necessary to ensure effective oversight, financing, partnership and collaboration for access to adequate quality water supply. The findings of this study enrich existing knowledge and hence are of use to both researchers and academicians for further investigations.

Literature Review

Theoretical Review

Theories propose reasons in the form of cause-and-effect relationships that explain the variation of a particular phenomenon in terms of the effects of the action of, or the variation in, another phenomenon – the why and the how (McAuley, Duberley and Johnson, 2007).

Resource Based View Theory

The RBVT of the firm is credited to Barney (1991) who identified that both internal and external factors are key determinants of business success. The RBV theory suggests that differences in enterprise performance are mainly driven by the intrinsic endowment of a firm's resources. According to Resource Based View theory, resources are inputs into a firm's production process and can be classified into three categories as; physical capital, human capital and organizational capital (Currie, 2009). Each organization is a collection of unique resources and capabilities that provides the basis for its strategy and the primary source of its returns. Thus, differences in firm's performances across time are driven primarily by their unique resources and capabilities rather than by an industry's structural characteristics (Currie, 2009; Baumol, Litan and Schramm, 2009).

According to Spanos and Lioukas (2001), the RBV theory can be used to explain the differences in competitive positions enjoyed by different organizations in a given industry. Through the resources owned and utilized in the production process, organizations are able to outperform their competitors and emerge winners (Peteraf and Bergen, 2003). Most RBV theorists portend that the resources affect an organizations ability to execute its game plan strategies which in turn affects organizational performance (Foss and Knudsen, 2003). This theory is used in the study to explain the role played by internal resources controlled by an organization in the level of performance recorded.

Empirical Literature Review

Strategic Resource allocation and organizational Performance

Firm's resources facilitate the development of sustainable competitive advantages. The primary argument is that firms hold heterogeneous and idiosyncratic resources on which their strategies are based (Gachua, 2017). Allocation of resources has influence on execution of management's sanction plans (Mango, 2014). The process of allocating an organization's resources basically involves aspects of budgeting, financial planning and optimal utilization of the available resources (Ongeti, 2014). Allocation of resources in an organization is central to the organization's management activity that facilitates sufficient and effective strategy implementation. According to Barnat (2016), the effectiveness of resource allocation is determined by the level of achievement of an organization's objectives. However, most organizations fail in strategy implementation due to limited resources (Okumu, 2013). Sterling (2003) notes that chronic lack of resources, capital and capacity hinders effective strategy implementation. According to Christensen and Donovan (2000), resource allocation is one of the critical factors that influence and ultimately comprise a company's strategy stream

and must therefore be tied to the organization's overall strategy. Resource allocation should be used as a basis for filtering strategic ideas and initiatives that are requisite for the implementation of strategic plans.

A study by Gachua (2017) evaluated the factors affecting strategy implementation in Private Universities in Kiambu County, Kenya through descriptive research design and a sample size of 133 respondents. The study found that there was insufficient funding to support strategy implementation and that successful strategy implementation required clarity of duties and tasks to be done. Further, Magiri (2018) studied strategy implementation at the Kenya Police Service Headquarters. The study adopted a descriptive research design and sampled 69 employees from a sample size of 345 employees. Data was analyzed using both descriptive and inferential statistics and established a positive relationship between resource availability, organization structure and organizational performance. However, this study also confirmed the positive relationship between strategic leadership and organizational performance.

Equally, Onyoro (2011) sought to establish the relationship between strategy implementation and organizational performance in the banking industry. The study established that strategy implementation lead to overall improvement in compliance with set budgetary levels, implementation of service delivery charter and innovation in research and technology.

Research and Methodology

The study adopted a correlation research design. A correlation study is a quantitative method of research in which the similarities between two or more quantitative variables from the same group of subjects are determined. According to Kothari (2004), correlation analysis studies the joint variation of two or more variables for determining the amount of correlation between two or more variables. The study used a sample size of 68 respondents out of a target population of this study comprised of 83 managers of KIWASCO. Stratified random sampling was used to select the respondents as it allows the population to have an equal chance of being selected in the different strata of senior, middle level and lower level managers. Data was collected using a semi-structured questionnaire containing open and close-ended questions. The researcher first conducted a pilot study on 10% of unselected respondents were used and a validity coefficient of 0.79 and a reliability coefficient of 0.8 obtained. Descriptive statistics of mean and standard deviation and inferential statistics of correlation and regression at a significance level of 0.05 was done.

The regression model that was used in this study was

$Y = \beta_0 + \beta_1 X_1 + e$

Where;

$\qquad$ Y= Dependent Variable (Organizational Performance)

$\qquad$ β_0 = Constant

β = Coefficient

X_1=Strategic Resource Allocation

e=   error term

H_0: Strategic Resource Allocation has no significant influence on Organizational Performance of KIWASCO, Kisumu County, Kenya

Performance=f(Strategic Resource Allocation, random variable)

Findings and Discussion

Out of the sampled 68 questionnaires, only 54 were dully filled representing a response rate of 79.8%. The study sought to establish the influence of strategic resource allocation on performance of KIWASCO, Kisumu County, Kenya. The researcher required the respondents to specify the extent to which strategic resource allocation influenced performance of KIWASCO. The responses were recorded on Table 1.

Table 1: Strategic Resource Allocation

	Frequency	Percent
No extent	3	5.6
Low extent	6	11.1
Moderate extent	8	14.8
Great extent	11	20.4
Very great extent	26	48.1
Total	**54**	**100.0**

The findings show that 48.1% of the respondents indicated that there was strategic resource allocation in KIWASCO to a very great extent, 20.4% to a great extent, 14.8% indicated to a moderate extent, 11.1% indicated to a low extent while 5.6% indicated to no extent. This implies that to a large extent strategic resource allocation was adequately done in KIWASCO as 68.5% agreed that the strategic resource allocation was good enough. The results are in conformity with Sterling (2003) who notes that chronic lack of resources, capital and capacity hinders effective strategy implementation.

Further, the respondents were requested to indicate the extent to which the following aspects of strategic resource allocation were practiced in the organization. The aspect of Strategic Resource Allocation was measured using five indicators of the organization allocates sufficient financial resources for strategic implementation; the organization has well trained human resource to support strategic implementation; the organization provide for proper utilization of physical resources that are available; the organization disburses financial resources in time and; the organization is legible for loans. The indicators were developed into five Likert items measured on a 5-point Likert scale as 1 = No extent, 2 = Low extent, 3 = Moderate extent, 4 = Great extent and 5 = Very great extent. The participants provided their opinion based on their level of agreement with each item. The results were analysed and presented using mean and standard deviation as presented in Table 2.

Table 2: Extent of Practice of Strategic Resource Allocation Aspects in KIWASCO

Statement items	Mean	Std. Dev.
The organization allocates sufficient financial resources for strategic implementation	4.111	0.718
The organization has well trained human resource to support strategic implementation	2.556	0.604
The organization provide for proper utilization of physical resources that are available	4.296	0.816
The organization disburses financial resources in time	4.389	0.596
The organization is legible for loans	4.204	0.655
Composite Mean	**3.911**	

The composite mean for Strategic Resource Allocation was above average 3.911 indicating that participants agreed that KIWASCO practiced strategic resource allocation. The results also revealed that to a high extent respondents agreed that the organization allocates sufficient financial resources for strategic implementation (Mean = 4.111); the organization provide for proper utilization of physical resources that are available (Mean=4.296); The organization disburses financial resources in time (Mean=4.389) and; The organization is legible for loans (Mean=4.204) since the line item statement means were all above the Composite Mean of 3.911. Equally, the results show that respondents to a low extent agreed that the organization has well trained human resource to support strategic implementation (Mean=2.556) as this mean was far below the composite mean of 3.911.

These findings are in line with Ongeti (2014) who postulates that resources can be generally classified into three categories: tangible, intangible and human. It is important to allocate resources in such a way that it is aligned with the chosen strategy and that it supports the achievement of the organizational objectives.

Relationship between Strategic Resource Allocation and organizational performance

The researcher sought to analyze the relationship between Strategic Resource Allocation and organizational performance. The regression analysis was used to establish the relations between the independent and dependent variables while correlation was conducted to assess the degrees of association between the variables. A Pearson moment correlation is a number between -1 and +1 that measures the degree of association between two variables. A positive value for the correlation implies a positive association while a negative value for the correlation implies a negative or inverse association. Table 3 shows the results for the Pearson moment correlation.

Table 3: Correlation Coefficients

		Performance	Strategic resource allocation
Performance	Pearson Correlation	1	
	Sig. (2-tailed)		
Strategic resource allocation	Pearson Correlation	.817	1
	Sig. (2-tailed)	.001	

*. Correlation is significant at the 0.05 level (2-tailed).

The analysis of correlation results between strategic resource allocation and performance of KIWASCO shows a strong positive correlation (R= 0.817), which is statistically significant at (p= 0.001<0.05). This shows that strategic resource allocation and performance of KIWASCO are statistically strongly and positively correlated such that as strategic resource allocation increases,

performance of KIWASCO also improves to a high extent. This is in line with Okumus (2013) who notes that resource allocation ensures provision of time, financial, human and knowledge resources vital for strategy implementation. Overall, strategic resource allocation had a significant influence on performance of KIWASCO.

Influence of Strategic Resource Allocation and Organizational Performance

Table 4: Stepwise Regression Analysis for Strategic Resource Allocation and Organizational Performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.513	0.264	0.249	1.397

ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig
	Regression	36.329	1	36.329	18.606	.007
1	Residual	101.53	52	1.953		
	Total	137.859	53			

Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.897	0.198		4.530	0.000
	Strategic Resource Allocation	0.889	0.343	0.513	2.592	0.012

From the output in Table 4, the model summary gives a R^2 value = 0.264 with p=0.007<0.05. This shows that Strategic Resource Allocation accounts for 26.4% of Organizational Performance. Moreover, the model was found to be a good fit for the data and variables with $F(1, 52) = 18.606$ (p = 0.007<0.05). The coefficient of the constant term (β=0.897, p = 0.000<0.05) and the coefficient of Strategic Resource Allocation (β= 0.889, p = 0.012<0.05) were found to be statistically significant. Thus, a unit change in Strategic Resource Allocation improves Organizational Performance by 0.889 units.

Linearly, the variables can be modeled using the equation:

$$Y = \beta_0 + \beta_1 X_1 + \varepsilon$$

Where; B_0 is coefficient of the constant term, β_1 is coefficient of the predictor (Strategic Resource Allocation), X_1 is the predictor (Strategic Resource Allocation) and ε is the error term.

Thus replacing the coefficients, the equation becomes:

$$Y = 0.897 + 0.889 X_1$$

Test for Hypothesis One

Hypothesis one was stated in the null and tested as:

H_0: There is no significant influence between Strategic Resource Allocation and Organizational Performance.

The null hypothesis was tested at 95% confidence level as $H_0 1: \beta_0 = \beta_1 = 0$ (p = 0.05). The null hypothesis was to be accepted when p > 0.05 (There is no significant difference) and rejected when p ≤ 0.05 (There is significant difference) between the coefficient of the constant term and the coefficient of the predictor.

Since the results showed that $\beta_0 \neq \beta_1 \neq 0$ (p < 0.05), null hypothesis was rejected and alternative accepted. Thus, there is a significant influence between Strategic Resource Allocation and Organizational Performance.

Conclusions

The study sought to establish the influence of strategic resource allocation on performance of KIWASCO, Kisumu County, Kenya. The study found that strategic resource allocation influences the performance of KIWASCO to a very great extent. The research revealed that the organization disbursed financial resources in time, provided for proper utilization of physical resources that are available, was legible for loans and allocated sufficient financial resources for strategic implementation to a high extent. Also, it was found that the organization had well trained human resource to support strategic implementation was moderate. Therefore, the study concludes that strategic resource allocation has significant influence on implementation of performance of KIWASCO, Kisumu County. The revelation that strategic resource allocation had a positive influence on performance of KIWASCO, was a good indication that increase in resource allocation motivates performance of KIWASCO. This variable was found to have a statistically

significant influence on performance of KIWASCO. The study recommends that the company should continue allocating more resources a more effective way and establish strategic partnerships with potential partners who have economic power to boost business plan investments by the institution. The County Government of Kisumu should also allocate adequate resources to KIWASCO to enable them expand their service coverage and to connect more households for increased revenue. Equally, the study recommends further research to include studies in other public water utilities in different counties and other highly regulated sectors like water.

References

Barnat, R. (2005). *The Nature of Strategy Implementation*. Retrieved from http://www.strategyimplementation.24xls.com/en101

Barney, J. B. (2001). Is the Resource-Based "view" a Useful Perspective for Strategic Management Research? Yes. *Academy of Management Review*, 26(1), 41-56.

Chimhanzi, J. & Morgan, R. E. (2005). Explanations from the marketing/human resources dyad for marketing strategy implementation effectiveness in service firms. *Journal of Business* Research, 58(1), 787– 796.

Cooper, D.R. & Schindler, P.S. (2003). *Business Research Methods*. (8thEdn.). Boston: McGraw-Hill Irwin.

Hrebiniak, L. G. & Joyce, W. F. (2005). Implementing Strategy: An Appraisal and Agenda for Future Research. *The Blackwell Handbook of Strategic Management*. (pp. 602- 626). Malden: Blackwell Publishing.

Marginson, D. E. W. (2002). Management control systems and their effects on strategy formation at middle management levels: evidence from a UK organization, *Strategic Management Journal,*23(1), 1019-10131

KIWASCO. (2014), *Nairobi City Water and Sewerage Company Limited Strategic Plan 2014/15-2018/19*. Nairobi: KIWASCO.

Ngechu. M. (2004). *Understanding the research process and methods. An introduction to research methods.* Nairobi: Acts Press.

Okumus F (2003). *A Framework to Implement Strategies in Organizations*. *Management Journal*, 41(9), 871-882.

Okumus, F. Avci, U. & Madanoglu, M. (2011). *Strategic orientation and performance of tourism firms: Evidence from a developing country. Tourism Management,* 32(1), 147–157.

Onyoro, D. (2011). *Competitive strategies and performance of multinational commercial banks in Kenya*. Unpublished MBA project, University of Nairobi.

Peteraf, M. &Barney, J. (2003). Unraveling the Resource-Based Tangle, Managerial and Decision Economics, *June*, 24(4), 67-69.

WASREB (2011). Impact: A Performance Report of Kenya's Water Services Sub-Sector, (3), Nairobi: Water Services Regulatory Board.