INFLUENCE OF ADHOCRACY CULTURE ON PERFORMANCE OF PUBLIC WATER COMPANIES IN KENYA

Gordon Khendi Misigo
PhD in Human Resource Management, Department of Entrepreneurship and Procurement, College of Human Resource Development, Jomo Kenyatta University of Agriculture and Technology, Kenya

Dr. Susan Were
Jomo Kenyatta University of Agriculture and Technology, Kenya

Prof. Romanus Odhiambo
Meru University of Science and Technology, Kenya

Full Length Research

Citation: Misigo, G. K., Were, S. & Odhiambo, R. (2019). Influence of adhocracy culture on performance of public water companies in Kenya. *International Academic Journal of Human Resource and Business Administration, 3*(5), 84-103

ABSTRACT

The purpose of this study was to investigate the influence of adhocracy culture on performance of public water companies in Kenya. The study was based on Cameron and Quinn's competing values framework for evaluation of an organization's culture. The independent and dependent variables that were investigated are adhocracy culture and organizational performance respectively. The study adopted descriptive and correlational research designs with a statistical sample of 185 employees in all cadres of the selected 17 public water companies. The data collected was sorted and analyzed using descriptive, diagnostic and inferential analyses. Statistical Package for Social Sciences Version 23.0 was used for data analysis and generation of tables, figures and relationships.

Inferential statistics including correlation, analysis of variance and multiple linear regression models were used to establish the association involving the independent and dependent variables. The correlation coefficient results show that adhocracy culture had a positive significant effect on performance, $r = .837$, $p = .000$. Regression results indicated that for every one unit change in adhocracy culture, performance increases by 0.327 units thus implying a positive impact of adhocracy culture on organizational performance. The study therefore found that adhocracy culture has a significant influence on performance of public water companies in Kenya.

Key Words: *adhocracy culture, Cameron and Quinn's competing values framework model, leadership values, organizational performance, public water companies*

INTRODUCTION

Organizations currently operate in an environment characterized by phenomenal global changes in the business environment (Schein, 2011). This has been attributed to among other factors, changing customer demands, rapid technical changes, and the rise of a global, knowledge-based economy (Im et al., 2012). Due these changes and the complexity of business environment, organizations are ever exploring ways to be more creative so as to continuously achieve high productivity. Organizational culture has been distinguished as one of the aspects that affect organizational performance (Duke II & Edet, 2012). In the prevailing era of globalization, organizational success not only depends on efficient utilization of resources and broad vision strategies but also on strong organizational culture in order to achieve real organizational success and glory (Schein, 2011).

In general, it has been argued by many researchers that, success-oriented organizational culture increases organizational performance (Denison, 1990; Furnham, 1997; Schein, 2011). In this perspective, organizational culture has a number of classifications that are helpful as a foundation for assessment of observable facts in various organizations. Furthermore, literature suggests that different types of culture have different effects on organizational performance (Naranjo-Valencia et al., 2016). One of the most applicable models for assessment and definition of organizational culture is the competing values framework (CVF)

developed by Cameron and Quinn (1999) which has four dominant organizational culture types. This study is based on one of the culture types of the CVF model, that is, adhocracy culture. The other three types are; clan culture, market culture and hierarchy culture.

Public Water Companies in Kenya

Drinkable water is considered vital for human development so much so that in September 2015, the UN General Assembly adopted a resolution recognizing safe drinking water as a human right. In 2010, Kenya ratified a new constitution identifying water as a fundamental human right. This recognition underscores Kenya's commitment to improving the standard of living and the quality of life of her citizens through gradual realization of sustainable access to safe, reliable and affordable water supply as envisaged in the Vision 2030.

The responsibility for provision of water services as per the Water Act, 2016 is vested in water companies or water service providers that operate as licensees of the Water Services Regulatory Board (WASREB). These water companies are wholly owned by County Governments given that provision of water services is a devolved function as per the Constitution of Kenya. Public water firms which are non-profit oriented organizations are therefore the main institutions that are mandated to facilitate appropriate and efficient service delivery to customers. According to WASREB (2016), eighty four (84) public water firms owned by the County Governments in Kenya have been licensed to operate and serve customers within their predefined service areas. A number of studies done locally indicate that public water utilities in Kenya are viewed as one of the elements that have abundant potential to expedite socio-economic growth and development (Kamali et al., 2015; Nyangena, 2008; Onsomu et al., 2013).

Kenya has a unique socio-economic development strategy anchored on the Constitution, Vision 2030 and Sustainable Development Goals (SDGs) whereby provision of affordable and safe water in adequate quantities is a very important national transformation milestone. According to a survey undertaken by WASREB (2016), average water coverage in urban and rural areas is at 55%. The trend in coverage has been growing very slowly in spite of increased funding and there is possibility of the sector not achieving the 2030 target of universal coverage. The necessity for improved organizational performance among public water utilities in Kenya is driven by the fact that water companies have faced a number of challenges including poor service delivery and revenue collection inefficiency (Briceño-Garmendia & Shkaratan, 2011; Macharia et al., 2015).

STATEMENT OF THE PROBLEM

Kenya aspires to become a middle-income nation by achieving an average annual GDP growth rate of 10% under the Vision 2030 Development Agenda. Satisfactory water services (WS) are critical in poverty reduction because their inadequacy results in public health risks whose impact is damage to the well-being of citizens, low productivity and increase in living costs (WASREB, 2016). If WS are well managed, they can contribute significantly to the

country's socio-economic growth. Although the Government of Kenya has been undertaking a sequence of reforms aimed at enhancing efficiency in service delivery, access to sufficient water supply still remains a challenge (The Water Act, 2016). Public water companies, whose responsibility is to provide WS, seem to be underperforming as per their mandate. This inefficiency is believed to be caused by, among other factors, disengaged employees, lack of accountability, corruption and inability to attract and retain skilled manpower (Robbins, 2001; WASREB, 2016). Poor performance by public water companies has led to a number of deficiencies which include, low number of water connections, illegal connections, decline in hours of supply, high levels of non-revenue water (NRW), high percentage of dormant connections, low revenue collection efficiency, weak financial status and customers' unwillingness to pay reflecting their dissatisfaction with the quality of services provided (WASREB, 2016). High levels of NRW, for instance, are detrimental to financial sustainability and commercial viability of water companies, as well to the quality of water supply. They also represent revenue losses for the water companies whose costs are passed on to already overburdened customers. Numerous studies have revealed a positive association involving organizational culture and performance. However, most of these studies have been conducted in developed countries and very few in developing countries, Kenya included (Davidson, 2003; Farashahi et al., 2005) and especially in the water sector. This view is validated by a number of researchers (Ahmad, 2012; Ali et al., 2017; Mousavi et al., 2015; Zakari et al., 2013) who have observed the necessity for empirical research in developing countries on the premise that their work environment is different from that of the Western World. Even though a number of studies have been conducted in Kenya (Njiru, 2016, Ng'etich, 2015; Misigo & Moronge, 2017) on public water companies, none has tackled the effect of adhocracy type of organizational culture on performance of the companies. Due to this insufficiency of information, the study sought to examine the influence of adhocracy type of culture on performance of public water companies in Kenya.

RESEARCH OBJECTIVE

To determine the influence of adhocracy culture on performance of public water companies in Kenya.

RESEARCH HYPOTHESIS

H1a: There is significant influence of adhocracy culture on performance of public water companies in Kenya.

THEORETICAL REVIEW

Dynamic Capabilities Theory

Barreto (2010) defines dynamic capabilities as those capabilities that characterize a firm's potential to systematically solve problems, formed by its propensity to sense opportunities and threats, to make timely and market-oriented decisions, and change its resource base.

Zollo and Winter (2002) indicate that the purpose of dynamic capabilities is to improve organizational performance, while Zahra et al. (2006) explained that the purpose of changing the resource base is to support the requirements of principal decision-makers of a firm. Wang and Ahmed (2007) explicitly state that the purpose of reconfiguration, reconstruction and upgrade of a firm's resource base is to respond to the changing environment in order to attain and sustain competitive advantage.

Researchers such as Eisenhardt and Martin (2000); Helfat et al. (2007) and Teece (2007) argue that dynamic capabilities represent an organization's capacity to identify the need or opportunity for change (sensing), formulate a response to such a need or opportunity (seizing), and execute a way of action (reconfiguring). The bridge between sensing and seizing is also understood to involve acquisition of strategic insights, whereas the relationship between seizing and reconfiguring refers to strategy execution (Helfat et al., 2007). The underlying assumption of the dynamic capabilities theory is that firms which are able to sense and then seize new opportunities and, further, reconfigure their resources and capabilities in line with recognized opportunities and environmental change can create and sustain a competitive advantage (Teece, 2012). Li and Liu's (2014) study of 217 firms China shows that dynamic capabilities significantly and positively affect competitive advantage, and that environmental dynamism is an important driver. Dynamic capabilities theory supports the variable of adhocracy culture by highlighting those organizations which are able to sense and then seize new opportunities and, further, reconfigure their resources and capabilities in line with recognized opportunities and environmental change can enhance and sustain desired performance.

Adhocracy Culture

Adhocracy culture is a developmental organizational culture that emphasizes new product and service development, growth, change and productivity (Cameron & Quinn, 2006; Tseng, 2010). The most important aim of this sort of culture is to promote suppleness and ingenuity where doubt and hopelessness proliferate. These characteristics reflect external orientation and have better developed knowledge conversion and corporate performance (Tseng, 2010). Adhocracy culture therefore focuses on change designed to satisfy key external stakeholders. This orientation concentrates on growth, stimulation, creativity and variety. Kim et al. (2004) argue that organizational culture that is characterized with adaptability to its external environment has the potential to positively affect performance outcomes.

Adhocracy culture is also characterized by a dynamic, entrepreneurial and creative environment. Prominence is accorded to innovativeness and ever enhancing the eminence of a firm's products and services. Strategic plans of adhocracy type of culture are anchored on eagerness for continuous change, acquisition of new knowledge and resources. Success means producing unique and value added products and services. Managers build an organization by developing a compelling vision and emphasizing new ideas and technologies, flexibility and adaptability. Ogbonna and Harris (2000) reported that adhocracy type of culture is positively related to organizational performance. Fekete and Bocskei (2011) found

that adhocracy culture influences economic outcomes of firms. Organizations transacting business over the internet which is defined as new economy, using advanced technology are examples of this culture (Acar & Acar, 2014).

EMPIRICAL REVIEW

Tseng (2010) undertook a study on the relationship between culture of a firm and information change on organizational productivity. The study specifically examined the association between adhocracy type of culture of a firm and information change on corporate performance under a Chinese-centric set of societal, cultural and linguistic attitudes and behaviours. The results of the study indicated that adhocracy type of culture enables knowledge conversion and enhances organizational productivity. Zhang and Zhu (2012) undertook a study to examine the association between the four CVF types of culture and firm productivity in 25 ventures of 9 regions in China. The outcome of the investigation revealed that adhocracy type of firm culture had an affirmative effect on business productivity and sales outcome.

Naranjo-Valencia et al. (2016) undertook a study on the associations between culture of a firm, novelty, and performance in Spanish industrial companies. They investigated the function of culture of an enterprise, as a dynamic that can mutually inspire or hold back novelty and consequently have an effect on performance of an enterprise using the cultural dimensions and typologies identified in the CVF model. The population comprised of Spanish organizations with more than 15 employees located in southeast Spain. It was designed to cover a range of industries, excluding those in the agricultural sector. Information was collected through face-to-face interview with the firms' CEOs. The outcome demonstrated that organizational culture can promote novelty of an enterprise in addition to its performance, or it could as well be an impediment for both of them, based on the ideals upheld by the culture. It was in addition established that adhocracy type of culture was the unsurpassed performance predictor. The study by Felipe et al. (2017) revealed a positive effect involving adhocracy type of culture and firm productivity. This is in line with prior related studies that have labelled agile organizations as highly adaptive and flexible. This finding also fits with prior studies' empirical support for the adhocracy culture being an important precondition for organizational performance success (Matzler et al., 2013).

RESEARCH METHODOLOGY

Research Design

According to Kothari (2004), research design is a plan, a roadmap and blueprint strategy of investigation conceived so as to get information on study questions. The choice of a research design is directed by the intention of the investigation, the kind of study, the duration within which information is to be gathered and the nature of evaluation to be undertaken (Sekaran, 2003). The study plan of an investigation thus determines the investigation category, investigation questionnaire and methods of evaluation (Groves, 2011). The study espoused

descriptive and correlational study methodology. Descriptive study methodology depicts analytically a condition, observable fact, plan of action; or gives data about, or expresses feelings to a subject (Kumar, 2011). Descriptive research is therefore used to obtain information concerning the current status of a phenomenon and to describe what exists with respect to variables or conditions in a situation (Kothari, 2004). Conversely, a correlational research methodology endeavours to ascertain the existence of an association involving two or more facets of a phenomenon (Creswell, 2012). The rationale for a correlational investigation is to establish whether two or more variables are related (Cooper & Schindler, 2014).

Target Population

Mugenda and Mugenda (2003) define target population as that population to which a researcher wants to generalize the results of a study. Kombo and Tromp (2009) define the target population as a grouping of persons, entities or articles from which samples are taken for measurement. The target population for this study consisted of all the 84 licensed public water companies in Kenya according to the list obtained from Water Services Regulatory Board (2016). The companies had in total 9,494 employees. For water companies to effectively achieve their mandate for greater public good, the abilities of all employees working in these organizations need to be optimized through effective management practices. This study therefore targeted employees in all cadres in the water companies which were sampled. Ordinarily, due to numerous limitations a researcher is not concerned about an entire population but a target population with characteristic which can be generalized to the entire population and meet set criteria of interest (Mugenda & Mugenda, 2003).

Sampling Frame

A sampling frame is an entire record of all features of a population an investigator hopes to investigate (Kothari, 2004). It contains of all the elements that can be sampled and may include individuals, households, or institutions (Särndal et al., 2003). The sampling frame for this study comprised of 84 licensed public water firms. The record of authorized public water companies maintained by Water Services Regulatory Board was used to pick the study sample. The sample drawn from the sampling frame was composed of employees at the top management, middle management and operative levels.

Sample Size and Sampling Technique

A sample, as defined by Cooper and Schindler (2014) is a portion of the entire population of concern and it is supposed to possess the attributes of the population to be studied. A sample size is an important feature of any empirical study in which the objective is to make references about a population from a sample (Kothari, 2004). Sampling is the selection of a subset of individuals from within a population, particularly for the intention of making predictions based on statistical inference (Saunders et al., 2007). The purpose of sampling is to gain an understanding about some features or attributes of the whole population based on

the characteristic of the sample (Cooper & Schindler, 2014). There are many approaches to establishing a sample size (Singh & Masuku, 2012). The dimension of a sample is a utility of the variation in the population (Sekaran, 2003). This is guided by a number of principles such as; dispersion, desired precision and error range. A sample of water companies which were the primary sampling units for this study was chosen by means of simple random sampling method. According to Orodho (2009), simple random sampling ensures that all units in the identified population have an identical and sovereign likelihood of being chosen as an affiliate of the sample. He further argues that random samples yield research data that can be generalized to a larger population within margins of error that can be determined statistically. On the sampling frame, each water company was assigned a unique number and a table of random numbers was used to select 17 companies, which formed 20 % of the total (84) authorized public water firms as indicated in Table 3.1 below. The selected number was above the minimum threshold sample size suggested by Gay (1992) that a sample size of 10 % of the target population is regarded as adequate when the population is small (less than 10,000). The study population was made up of all employees of the 17 sampled public water firms so as to ease in-depth comprehension of the variables. The employees comprised of three job cadres, that is, top management, middle management and operatives. The 17 water companies form part of the total 84 public water firms licensed by WASREB with all population characteristics. The sample size determination formula by Nassiuma (2000) was adopted to determine the sample size and calculated according to the following formula:

$$n = \frac{Nc^2}{c^2 + (N-1)\,e^2}$$

Where: n is the sample size, N denotes population, c is covariance and e is the standard error.

Nassiuma (2000) asserts that in most surveys, a coefficient of variation in the range of $21\% \leq C \leq 30\%$ and a standard error in the range $2\% \leq e \leq 5\%$ is usually acceptable. Therefore a coefficient variation of 30% and a standard error of 2% were used for the study. The higher limits for coefficient of variation and standard error were selected so as to ensure low variability in the sample and minimize the degree of error. Using the formula illustrated above, a sample size of 185 was computed as shown below. The sample size selected represented 17.8% of the accessible population which is above the 10% of the accessible population that is generally recommended for descriptive studies (Mugenda & Mugenda, 2003). Proportionate stratified sampling was then used to establish the number of respondents from the 17 sampled water companies based on the three subgroups, that is, top management, middle management and operatives. The numbers in each subgroup were computed in a way that the subgroup percentages in the population were reflected in the sample.

$$n = \frac{1{,}041 * 0.3^2}{0.3^2 + (1{,}041 - 1)*0.02^2} \approx 185$$

Data Collection Instruments

A researcher needs to develop instruments with which to collect the necessary information (Mugenda & Mugenda, 2003). Primary and secondary data were utilized for the study. Primary data is information initiated initially by an investigator purposely for addressing a research problem. Secondary data refers second-hand information which is already gathered and documented by any someone else save for the user for a reason, not concerning a given current research problem. Primary data was gathered by means of a questionnaire that captured the various variables under study. A questionnaire is a research tool that is utilized to gather data and its purpose is to interpret the research objectives into specific questions and answers for each question to provide data for hypothesis testing (Bulmer, 2004). Questionnaire is generally the instrument utilized for data collection in field research (Creswell, 2002). According to Kothari (2004), the advantages of a questionnaire over other instruments of data collection include: information can be collected from large samples within a short time at a nominal expenditure on the side of the researcher, no opportunity for bias since it is presented in paper form and confidentiality is upheld. Questionnaires also offer respondents the opportunity to express their own views and offer anonymity which helps to produce more candid answers than is possible in an interview (Gay, 1992). Sekaran (2003) further argues that questionnaires intensify independence and accuracy of responses from the respondents. In order to give respondents freedom to express themselves; the questionnaire for this research had closed and open-ended questions. The study espoused OCAI questionnaire developed by Cameron and Quinn's (1999) as one of the data collection instruments. It was customized to incorporate questions on organizational performance. Secondary data was collected through evaluation of company reports such as employee and customer satisfaction surveys, strategic/business plans, performance contract reports, annual accounts reports, customer service charters, human resource policy and procedures manuals, code of conduct manuals, company journals, stakeholder workshop reports, Kenya Government reports, reports by the regulator (WASREB), publications and review of information from the available websites of the respective water companies as far as they provided relevant and up to date information. The secondary data collected was used to support the findings on the primary data and present additional information which might have not been provided by the respondents.

Data Collection Procedure

Primary data was collected using self-administered questionnaires. The target participants were employees in all cadres in the water companies which were sampled. Drop and pick procedure was used to administer the questionnaires. The questionnaire contained both closed and open ended questions, which gave the respondents freedom to express themselves. The target participants were employees in all cadres in the water companies which were sampled.

RESEARCH RESULTS

The objective of descriptive statistics is to facilitate a study to significantly describe distribution of measurements or scores by means of statistics or indices. The kind of statistics or indices utilized depends on the class of variables in a study and the echelon of dimensions. Mean, standard deviation and covariance measures were utilized to present the results pertaining to the correlation of the study variables.

The independent variable in this study was adhocracy culture which embodies a responsive environment with prominence on creativity. Adhocracy culture was operationalized by promotion of individual initiative, entrepreneurial leadership and acquisition of new resources. A five-point Likert kind of scale was utilized to analyze each construct. The results demonstrate that most of the respondents concurred that the administration of people in their companies was exemplified by encouragement of personal inventiveness as supported by a mean of 4.19, a standard deviation of 0.76 and a covariance of 0.699. The leadership of the organizations was generally considered to exemplify entrepreneurship as supported by a mean of 4.17, a standard deviation of 0.73 and covariance of 0.660. Respondents indicated that they agreed that one of the strategic priorities in their organizations was acquisition of new resources as demonstrated by a mean of 4.18, a standard deviation of 0.76 and a covariance of 0.580.

Respondents concurred that the glue that united their companies was compulsion to creativity and progress as demonstrated by a mean of 4.17, a standard deviation of 0.79 and a covariance of 0.732. In water companies owned by County Governments in Kenya, the originality and search for opportunities were highly valued as indicated by a mean of 4.03, a standard deviation of 0.90 and a covariance of 0.708. Public water companies emphasized growth and readiness to meet new challenges as indicated by a mean of 4.14, a standard deviation of 0.86 and a covariance of 0.800. There was commitment to creation of new ways of providing services to customers as supported by a mean of 4.11, a standard deviation of 1.08 and a covariance of 1.118. The results support the study findings by Tseng (2010) that adhocracy type of culture of an organization has a considerable positive effect on a firm's performance.

DIAGNOSTIC TESTS

Subsequent to fitting a regression model, it is important to determine whether all the necessary model assumptions are valid before performing inference. If there are any violations, consequent inferential procedures may be invalid resulting in flawed conclusions. It is therefore important to execute suitable model diagnostics before conducting statistical tests. Diagnostic procedures permit a researcher to investigate whether the suppositions of a regression model are valid so as to make a decision on the validity of subsequent inference results (Brooks, 2014). The diagnostic tests generally carried out in a study are linearity, normality, multicollinearity and heteroscedasticity. In this study, normality test was carried out.

The fundamental assumption in regression analysis is the normality of the residuals in the dependent variable in order to take a broader view of results of a research beyond the sample collected (Field, 2009). The test for normality of the dependent variable was done by use of Kolmogorov-Smirnov test and graphical method to test whether organizational performance data was distributed normally.

The null and alternative hypotheses are as follows; Ho: the data is normally distributed and H1: the data is not normally distributed. Given that $\alpha = 0.05$, the rule is that if the p-value is greater than 0.05, H1 is accepted; if the p -value is less than 0.05, Ho is rejected and H1 accepted. The results obtained in Table 1 below indicate that Kolmogorov-Smirnov Z statistic is 0.106 (p-value=0.001). Given that the p-value is less than 0.05, the null hypothesis was rejected and the alternative hypothesis accepted. It was therefore concluded that the data for the study was normally distributed and fit for linear regression analysis. The results obtained using graphical method in Figure 1 below further show the residuals were normally distributed. Based on the results of the Kolmogorov-Smirnov test and the graphical method, the study failed to reject the null hypothesis and rejected the alternative hypothesis.

Table 1: Kolmogorov-Smirnov Test

		Organizational performance
N		126
Normal Parameters [a,b]	Mean	29.01
	Std. Deviation	5.46
Most Extreme Differences	Absolute	.106
	Positive	.069
	Negative	-.106
Test Statistic		.106
Asymp. Sig. (2-tailed)		.001[c]

    a.   Test distribution is Normal
    b.   Calculated from data
    c.   Lilliefors Significance Correction
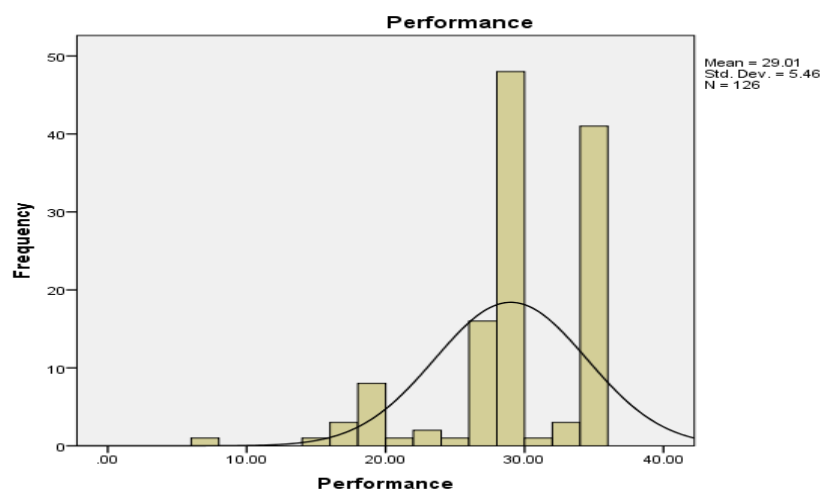
Figure 1: Normality Test

INFERENTIAL STATISTICS

Correlation Analysis

Coefficient of correlation (r) refers to the determination of linear relation involving two variables. Pearson's coefficient of correlation is the most commonly utilized technique of evaluating the extent of relationships between variables (Orodho, 2009). The value of r is commonly used to summarize the association between two variables. Positive value of r implies positive correlation while negative value of r implies negative correlation. When the r value is +1, it implies that there is a perfect positive association among the two variables whereas while it is -1; it implies that there exists a perfect negative association among the variables. A correlation coefficient of 0 (r= 0) shows that there is no linear association among the two variables. This technique presupposes that the data is from a population which is normally spread.

The study carried out correlation examination among the variables (adhocracy culture and organizational performance) of the study by making use of the Pearson product-moment correlation coefficient. The findings in Table 2 below illustrate that adhocracy culture had a Pearson correlation of 0.837, an indication of strong positive correlation with organizational performance. The results of this study also support those of Tseng (2010) that adhocracy culture has a considerable positive effect on organizational performance.

Table 2: Correlation Analysis

		Performance	**Adhocracy**
Performance	Pearson Correlation	1	
	Sig. (2-Tailed)		
	N	126	
Adhocracy	Pearson Correlation	.837**	1
	Sig. (2-Tailed)	.000	
	N	126	126

**. Correlation is Significant at the 0.01 Level (2-Tailed).

Regression Analysis

Regression analysis is a statistical technique to determine the linear relationship between two or more variables. Regression is primarily used for prediction and causal inference. The regression coefficient (r2) shows how well the values fit the data. The r2 and adjusted r2 are two statistics used in assessing the fit of the model; values close to 1 indicate a better fit. To ascertain the causal effect of one variable upon another, a researcher assembles data on the underlying variables of interest and employs regression to estimate the quantitative effect of the causal variables upon the variable that they influence. A researcher also assesses the statistical significance of the estimated relationships, that is, the extent of confidence that the

true relationship is close to the estimated relationship. The aim of regression analysis therefore is to identify the variables concurrently associated with a criterion variable and guess the dissimilar consequence of each variable on the criterion one. Findings of the regression analysis and analysis of variance (ANOVA) of the variables under study are presented herein below.

Adhocracy Culture and Organizational Performance

Regression analysis was applied to ascertain if there was a link involving adhocracy culture and performance. This was done by assessing the contribution of adhocracy culture in explaining organizational performance. Table 3 below shows that the model summary for the linear regression analysis involving adhocracy culture and performance indicated R-square of 0.543. This implies that adhocracy culture can explain a variation of 54.3% of the dependent variable. The remaining 45.7% can be elucidated by other aspects in relation to performance of water companies owned by County Governments in Kenya. The R square value is an important indicator of the predictive accuracy of the equation. The findings therefore indicate that adhocracy culture plays a significant role in enhancing organizational performance.

Table 3: Model Summary for Adhocracy Culture and Organizational Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.737[a]	.543	.531	1.04204

a. Predictors: (Constant), Adhocracy
b. Dependent Variable: Organizational Performance

ANOVA for Adhocracy Culture and Organizational Performance

ANOVA was applied in this investigation to ascertain the import of the regression model. The statistical significance was deemed noteworthy if the P-value was less or equal to 0.05. The findings in Table 4 below illustrate the importance of the regression model with P-value of 0.000 which is less than 0.05. The outcome in addition demonstrates that the regression model is statistically important in envisaging the influence of adhocracy culture on performance of water companies owned by County Governments in Kenya.

The ANOVA results indicate that F-critical (1,124) was 3.9175 while the F-calculated was 146.146. This shows that F-calculated is greater than the F-critical, hence there is a positive significant linear association involving adhocracy culture and performance. This means that when there is a variation in adhocracy culture, there is a considerable variation in performance. In addition, the P-value was 0.000, which is less than the significance level (0.05). This confirms goodness of fit of the model predicting the positive and considerable effect of adhocracy culture on organizational performance.

Table 4: ANOVA for Adhocracy Culture and Organizational Performance

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	3259.06	1	3259.06	146.146	.000[b]
Residual	2742.9	124	22.120		
Total	6001.96	125			

a. Predictors: (Constant), Adhocracy Culture

b. Dependent Variable: Organizational Performance

Regression Coefficients for Adhocracy Culture and Organizational Performance

The results in Table 5 below show that organizational performance had a positive index of 5.733 when adhocracy culture (X1) was held constant. This implies that as adhocracy culture improves by one-unit, organizational performance increases by 0.327 units. The relationship is significant as the P-value (0.000) was less than the significance level (0.05). The equation for regression of adhocracy culture on organizational performance is shown below:

$$Y = 5.733 + 0.327X_1$$

Table 5: Regression for Adhocracy Culture and Organizational Performance

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	5.733	1.057		5.422	.000
Adhocracy	.327	.124	.258	2.647	.000

    a.   Dependent Variable: Organizational Performance

The finding shows that adhocracy culture has a positive influence on performance of water public companies in Kenya. The finding supports the findings of Naranjo-Valencia et al., (2016) that the adhocracy culture fosters organizational performance. The finding also supports that of Zhang and Zhu (2012) who found in their study that adhocracy culture had a positive impact on performance of 25 enterprises of 9 provinces in China. The implication of the finding is that leaders of water firms owned by County Governments in Kenya should make effort to develop a stable adhocracy culture in order to enhance performance of their organizations.

HYPOTHESIS TESTING

Generally, p-values have values between 0 and 1. The closer the p-value is to zero, the more robust the evidence that the alternative hypothesis should be allowed. Hypothesis testing was carried out at 5% level of significance and SPSS Version 23.0 was used for this purpose.

H1a: There is significant influence of adhocracy culture on performance of public water companies in Kenya.

To test this hypothesis, linear regression was performed to find out the level of import of the association involving adhocracy culture and performance of public water firms owned by County Governments in Kenya. The beta coefficient (β_2) is 0.327 as shown in Table 5; the P-value is $0.000 < 0.05$, which is less than the significance level (0.05) as the t-calculated (2.647) is greater than the t-critical value (1.645). Based on these findings and given that the p-value is less than 0.05; the study did not reject the alternative hypothesis that there is significant influence of adhocracy culture on performance of water companies. This signifies that performance of public water companies in Kenya is positively influenced by adhocracy culture. This finding agrees with that of Zhang and Zhu (2012) who found in their study that adhocracy culture had a positive impact on performance of 25 enterprises of 9 provinces in China.

CONCLUSIONS

The general purpose of this research was to ascertain the impact of adhocracy culture on performance of public water companies in Kenya. The outcome of the research revealed that adhocracy culture has a considerable association with organizational performance. This study provides additional empirical evidence from the water sector in Kenya to the research stream on adhocracy culture. The results of this research present both a theoretical and empirical case arguing that adhocracy culture is imperative for improving performance of a firm. The research advanced discussions on the authenticity of adhocracy culture by demonstrating its applicability in public water companies in Kenya.

Adhocracy culture; which is the ability of an organization to respond to change was found to be positively related to organizational performance. A number of explanations may account for this significant positive relationship. Managers of organizations often endeavour to develop and implement strategies to position their business with a view to improving performance. To survive and enhance performance, organizations have to adapt continuously to different levels of environmental changes. The desire for customer satisfaction also makes water companies owned by County Governments in Kenya to engage in activities geared towards improvement in service delivery. Organizations that have the ability to adjust to changes in their environment will be more sustainable than those that do not have such ability. Adhocracy culture encourages employees to focus on client contentment and support initiatives that will keep pace with changes in their environment. This result implies that the water companies need to pay more attention to adhocracy culture related characteristics and endeavour to implement them.

Organizations with strong adhocracy culture where employees focus on customer contentment and share the larger vision for their company are more likely to have a cohesive workforce which promotes productivity. Based on the research results presented, it can be concluded that adhocracy culture influences performance of water public water companies in Kenya. Creation and adoption of an appropriate organizational culture such as adhocracy culture is considered as one of the most vital aspects in achieving and maintaining employees' high commitment in an organization. This is because adhocracy culture among

other factors plays a significant role in a firm's performance and success as it affects job contentment and performance of employees.

RECOMMENDATIONS

The study findings indicated that there exists positive relationship between adhocracy culture and performance of public water companies in Kenya. Adhocracy culture is a dominant forecaster of work contentment echelon of employees and consequently performance of a firm. In the current business environment, leaders and managers are always preparing themselves to adapt to changes quickly for the survival of their firms. This research therefore proposes that public water firms in Kenya should promote employees' creativity and adaptability by fostering adhocracy culture. This will encourage employees to produce creative work and promote the spirit of adventure and innovation. The study further recommends that public water companies should endeavour to create a learning culture so as to adapt to the rapid changes in their external environments. This will help employees to enhance their knowledge, experience and ideas so as to provide services according to the ever-changing consumers' needs and wants. In today's world, organizational achievement is dependent on getting and developing new ideas and using these ideas to offer unique products and services in the eyes of a firm's clients.

Public water firms' leadership and management should ensure that their organizations are characterized by adaptability to their external environment. This may be achieved through developmental organizational culture such as adhocracy culture that emphasizes new products and service development, growth, change and productivity designed to satisfy external stakeholders. Managers ought to build their organizations by developing a compelling vision and emphasizing new ideas, dynamism and entrepreneurship oriented to the future. Organizational type of culture that is characterized by adaptability to its external environment has the potential to positively affect performance outcomes. Leaders and managers of public water firms ought to build their organizations by clarifying objectives and improving a performance through hard work and productivity. Organizations in which efficiency and achievement is the norm motivate employees by setting challenging yet attainable goals and by providing feedback on employee performance, which in turn promotes awareness of proficiency and sentiments of self-efficiency and collective efficacy.

REFERENCES

Acar, A.Z., & Acar, P. (2014). Organizational culture types and their effects on organizational performance in Turkish hospitals. *Emerging Markets Journal, 3*(3), 18-31.

Ahmad, M.S. (2012). Impact of organizational culture on performance management practices in Pakistan. *Business Intelligence Journal, 5*(1), 50-55.

Ali, H.S.H., Said, R.M., Abdullah, A., & Daud, Z.M. (2017). The impact of organizational culture on corporate financial performance: A review. *International Journal of Economics, Commerce and Management. 5*(8), 585-597.

Barreto, I. (2010). Dynamic Capabilities: A Review of Past Research and an Agenda for the Future. *Journal of Management, 36*(1), 256-280.

Briceño-Garmendia, C., & Shkaratan, M. (2011). *Power tariffs: Caught between cost recovery and affordability.* World Bank policy research working paper 5904. Washington, DC: The World Bank.

Brooks, C. (2014). *Introductory econometrics for finance*. Cambridge: Cambridge University Press.

Bulmer, M. (Ed.). (2004). *Questionnaires: Sage benchmarks in social research methods (*1st ed.). London: Sage Publications.

Cameron, K. S., & Quinn, R. E. (1999). *Diagnosing and changing organizational culture: Based on the competing values framework.* Reading, MA: Addison-Wesley.

Cameron, K. S., & Quinn, R. E. (2006). *Diagnosing and changing organizational culture based on the competing values framework*. San Francisco, CA: John Wiley & Sons.

Cooper, D. R., & Schindler, P. S. (2014). *Business research methods* (12th ed.). Boston: McGraw-Hill.

Creswell, J. W. (2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (4th ed.). New York: Pearson.

Davidson, M. G. (2003). *The relationship between organisational culture and financial performance in a South African investment bank.* Unpublished Master of Business Commerce Project Report. Pretoria: University of South Africa.

Delaney, J.T., & Huselid, M.A. (1996). The impact of human resource management practices on perceptions of performance in for-profit and nonprofit organizations. *Academy of Management Journal, 39*(1), 949-969.

Duke II, J., & Edet, G.H. (2012). Organizational culture as a determinant of Non-Governmental organization performance: Primer evidence from Nigeria. *International Business and Management*, *4*(1), 66-75.

Eisenhardt, K. M., & Martin, J. A. (2000). Dynamic capabilities: What are they? *Strategic Management Journal, 21*, 1105-1121.

Elkington, J. (1998). *Cannibals with forks: the triple bottom line of 21st century business*. British Columbia: New Society Publishers.

Farashahi, M., Hafso, T., & Molz, R. (2005). Institutionalized norms of conducting research and social realities: a research synthesis of empirical works from 1983 to 2002. *International Journal of Management Review, 7*(1), 1-24.

Fekete, H., & Bocskei, E. (2011). Cultural Waves in Company Performance. *Research Journal of Economics*, *Business and ICT, 3*, 38-42.

Felipe, C.M.; Roldán, J.L.; & Leal-Rodríguez, A.L. (2017). Impact of organizational culture values on organizational agility. *Sustainability, 9*(2354), 1-23.

Field, A. P. (2009). Discovering statistics using SPSS: and sex and drugs and rock 'n' roll (3rd ed.). London: Sage.

Freeman, E. (1984). *Strategic management: A stakeholder approach*. Boston: Pitman.

Freeman, R.E., Harrison, J.S., Wicks, A.C., Parmar, B. L., & de Colle, S. (2010). *Stakeholder theory: The state of the art*. Cambridge: Cambridge University Press.

Furnham, A. (1997). Knowing and faking one's five-factor personality scores. *Journal of Personality Assessment, 69*, 229–243.

Gay, L. R. (1992). *Educational Research: Competences for analysis and application* (4thEd.). New York: MacMillan Publishers.

Groves, R. M. (2011). Three Eras of Survey Research. *Public Opinion Quarterly, 75*(5), 861-871.

Hamon, T.T. (2003). *Organizational effectiveness as explained by social structure in a faith-based business network organization*. Regent University, Virginia Beach, VA.

Helfat, C. E., Finkelstein, S., Mitchell, W., Peteraf, M. A., Singh, H., Teece, D. J., & Winter, S.G. (2007). *Dynamic Capabilities: Understanding Strategic Change in Organizations*. Malden, MA: Blackwell Publishing.

Im, S., Montoya, M., & Workman, J. (2012). Antecedents and consequences of creativity in product innovation teams. *Journal of Product Innovation Management*, *30*(1), 170-185.

Kamali, R., Musiega, D., & Mbithi, S. (2015). Factors influencing implementation of strategic plans at Amatsi water services company in the county government of Vihiga, Kenya. *The International Journal of Business & Management 3*(11), 90-96.

Kombo, D.K., & Tromp, D.L.A. (2009). *Proposal and thesis writing: An introduction.* Nairobi: Don Bosco Printing Press.

Kothari,C.R. (2004). *Research Methodology, methods and techniques* (2nd ed.). New Delhi: New Age International Publishers.

Legge, K (1998). The morality of HRM. In C. Mabey, D. Skinner & T. Clark (Eds.). *Experiencing Human Resource Management* (pp. 14-32). London: Sage.

Li, D. Y., & Liu, J. (2014). Dynamic capabilities, environmental dynamism, and competitive advantage: Evidence from China. *Journal of Business Research*, *67*(1), 2793-2799.

Macharia, E.W., Mbassana, M., & Oduor, J. (2015). Assessing sustainability of rural water projects in naivasha, Kenya, case study: Maraigushu water project. *European Journal of Business and Social Sciences, 4*(7), 52 – 83.

Matzler, K., Abfalter, D. E., Mooradian, T. A., & Bailom, F. (2013). Corporate culture as an antecedent of successful exploration and exploitation. *International Journal of Innovation Management, 1*(5), 1-23.

Misigo, M. B., & Moronge, M. (2017). The influence of organizational culture on employee performance in Kenya's civil service: a case of the Ministry of Water and Irrigation. *The Strategic Journal of Business & Change Management, 4*(51), 993 – 1009.

Mousavi, S.A., HosseinI, S.Y., & Hassanpour, N. (2015). On the effects of organizational culture on organizational performance: An Iranian experience in state bank branches. *Iranian Journal of Management Studies 8*(1), 97-116.

Mugenda, O. M., & Mugenda, A.G. (2003). *Research Methods: Quantitative and Qualitative Approaches*. Nairobi: Acts Press.

Naranjo-Valencia, J. C., Jiménez-Jiménez, D., & Sanz-Valle, R. (2016). Studying the links between organizational culture, innovation, and performance in Spanish companies. *Revista Latinoamericana de Psicología, 48*(1), 30-41.

Nassiuma, D. K. (2000). *Survey and sampling: Theory methods*. Nairobi: University of Nairobi press.

Ng'etich, C.K. (2015). *Corporate governance and financial performance of water companies in Kenya*. Unpublished Msc. Project Report. Nairobi: University of Nairobi.

Njiru, D. (2016). *the effect of internal controls on financial performance of public water companies in Kenya*. Unpublished Msc. Project Report. Nairobi: KCA University.

Nyangena, K. (2008). Privatization of water and sanitation services in Kenya: Challenges and prospects. *Africa Development, 33*(4), 117-131.

Ogbonna, E., & Harris, L. (2000). Leadership style, organizational culture and performance: Empirical evidence from UK companies. *International Journal of Human Resources Management, 11*(4), 766-788.

Onsomu, L.N., Bichanga,W. Munene, C., & Obonyo, G.O. (2013). Factors influencing the financial viability of a water service provider in Kenya: The case of Gusii water and sanitation company limited. *International Journal of Arts and Commerce, 2*(9), 107-127.

Orodho, J.A. (2009). *Elements of Education and Social Science Research* Methods (2nd ed.). Maseno: Kanezja Publisher.

Putu, N.I., Mimba, S.H., Van-Heden, J., & Tillema, S. (2007). Public sector performance measurement in developing countries: A literature review and research agenda. *Journal of Accounting and Organisational Change*, *3*(3), 16-17.

Robbins, S.P. (2001). *Organizational behavior* (9th ed.). New Jersey: Prentice-Hall, Inc.

Särndal, C., Swensson, B., Wretman, J. (2003). *Model assisted survey sampling* (2nd ed.). New York: Springer Verlag.

Saunders, M., Lewis, P., & Thornhill, A. (2007). *Research methods for business students* (4thed.). Harlow: Prentice Hall Financial Times.

Schein, E. (2011). *Organizational culture and leadership*. (4th ed.). San Francisco: Jossey-Bass.

Schermerhorn, J. R., Hunt, J. G., Osborn, R. N., & Osborn, R. (2004).*Core concepts of organizational behavior*. New York: John Wiley & Sons Inc.

Schwartz, S., Gila, M., Lehmann, A., Burgess, S., Harris, M., & Owen, V. (2001). Extending the cross cultural validity of the theory of basic human values with a different method of measurement. *Journal of Cross-Cultural Psychology*, *32*, 519-542.

Sekaran, U. (2003). *Research methods for business: A skill building approach* (4th ed.). New York: John Willey & Sons, Inc.

Singh, A.S., & Masuku, M.B. (2012). An insight statistical techniques and design in agricultural and applied research. *World Journal of Agricultural Sciences, 8*(6), 568-584.

Teece, D. (2007). Explicating dynamic capabilities: The nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal*, *28*(13), 1319–1350.

Teece, D. J. (2012). Dynamic capabilities: Routines versus entrepreneurial action. *Journal of Management Studies*, *49*(8), 1395-1401.

Tseng, S. (2010). The correlation between organizational culture and knowledge conversion on corporate performance. *Journal of Knowledge Management, 14*(2), 269-284.

Tsui, A.S. (1990). a multiple constituency model of effectiveness: an empirical examination of the human resource subunit model: *Administrative Science Quarterly, 35***,** 458-483.

Wang, C. L., & Ahmed, P. K. (2007). Dynamic capabilities: a review and research agenda. *International Journal of Management Reviews, 9*(1), 31-51.

WASREB (2016). *Impact: A Performance Review of Kenya's Water Services Sector 2014-15*. Issue No. 9/2016. Retrieved from http://wasreb.go.ke/impact-reports.

Zahra, S. A., Sapienza, H. J., & Davidsson, P. (2006). Entrepreneurship and dynamic capabilities: A review, model and research agenda. *Journal of Management Studies, 43*(4), 917-955.

Zakari, M., Poku, K., & Ansah, O.W. (2013). Organizational culture and organizational performance: empirical evidence from the banking industry in Ghana. *International Journal of Business, Humanity and Technology*, *3*(1), 95-107.

Zhang, Z., & Zhu, X. (2012). *Empirical Analysis of the Relationship between organizational culture and organizational performance*. Paper presented at the National Conference on Information Technology and Computer Science, Lanzhou, China.

Zollo, M., & Winter, S. G. (2002). Deliberate learning and the evolution of dynamic capabilities. *Organization Science, 13*(3), 339-351.