

DETERMINANTS OF PERFORMANCE IMPROVEMENT IN PUBLIC WATER COMPANIES IN KENYA

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Abstract: This study focused on determinants and factors that play a role in performance improvement in public water companies in Kenya. For the last one decade or so, the Government of Kenya has been implementing aggressive Water Sector reforms aimed at bringing about radical change in the water and sanitation sector. Although a lot of gains were achieved within this time, sustainable access to safe water and basic sanitation remains elusive to many Kenyans in terms of quality and quantity. The ministry in charge of water services has been mandated by the Government of Kenya to design and implement law that guarantee provision of adequate quality drinking water to the public. In furtherance to this cause, the following water agencies was instituted. The Water Services Regulatory Board (WASREB) were mandated to regulate the water agencies by checking on compliance with the legal regulatory environment. According to the water service regulatory Board (WASREB) Impact report 2014, Water Coverage for urban areas stood at 54%, whereas the 2016/2017 target was 76%. In the same period, urban sanitation stood at 73% against a sector target of 78% by 2016 as set by the national Water Services Strategy (NWSS). Water coverage in the rural areas was even lower at 51%. This study aimed at bridging the existing gaps by examining the Determinants of Performance Improvement of Public Water Companies in Kenya by studying four variables; benchmarking, ICT, legal and regulatory framework and staff managerial skills. This study provides more insight on the Determinants of Performance improvement of Public Water Companies in Kenya. The beneficiaries of this study will be; the government, water companies, researchers and scholars. The findings of this study was significant to the entire water sector in Kenya because they served as references in setting certain standards for service delivery. The study focused on the 100 registered Public Water Companies in Kenya. The unit of observation was the middle level and top level managers in the 100 registered Public Water Companies in Kenya. The unit of analysis was the 100 registered Public Water Companies in Kenya. The study employed descriptive research design since it portrays an accurate profile of situations. The target population was 100 water companies registered by WAPSA. The study adopted a census survey with the respect of the unit analysis which all the registered Public Water Companies in Kenya. The data was then coded and checked for any errors and omissions (Kothari, 2010). Frequency tables, percentages and means was used to present the findings. Responses in the questionnaires was tabulated, coded and processed by use of a computer Statistical Package for Social Science (SPSS) version 23.0 programme for data analysis. Study findings revealed that benchmarking should not only compare the outputs but also the process in which the output is obtained, where customer satisfaction always takes the center stage. The findings revealed that WASREB monitors and documents the performance of public water companies; from the findings, it was found out that obsolete technology allows down operations in the organization; it discourages innovation in the organization and that due to obsolete technology, the quality of products usually gets compromised. On staffs managerial skills, the study found out that the staff are involved in the implementation of strategies. The Study Concludes that benchmarking should not only compare the outputs but also the process in which the output is obtained, where customer satisfaction always takes the center stage and that benchmarking provides a starting point to determine where inefficiencies lie by providing

the bench marker with a comprehensive study of the relative performance of all the participants then identified gaps between the organization and its peers. The study recommended that staffs should be involved in the implementation of strategies that should have knowledge about the performance improvement in the public water companies that staffs should have the ability to understand the concepts of performance improvement in the companies and that they should have the ability to interact with each other and motivate one another since this affects performance of water companies significantly.

Keywords: Benchmark, Legal Framework, Information communication technology (ICT), Management skills Performance.

1. INTRODUCTION

Background of the Study:

This study focuses on determinants and factors that play a role in performance improvement in public water companies in Kenya. For the last one decade or so, the Government of Kenya has been implementing aggressive Water Sector reforms aimed at bringing about radical change in the water and sanitation sector. Although a lot of gains have been achieved within this time, sustainable access to safe water and basic sanitation remains elusive to many Kenyans in terms of quality and quantity. The main reason for the dismal performance include old infrastructure, inadequate management and maintenance of existing Infrastructure, Insufficient sustainability measures, inadequate Investments and inadequate focus on the options of fast tracking access and informal service provision within a framework of basic standards and regulation (WP, 2013).

Specific Objectives:

The study was guided by the following specific objectives.

1. To determine the extent to which benchmarking influences the performance improvement in Public Water companies in Kenya.
2. To establish the influence of legal and regulatory framework on performance improvement in Public Water Companies in Kenya.
3. To explore the extent to which ICT determine the performance improvement in Public Water Companies in Kenya.
4. To establish how staff managerial skills influence the performance improvement in Public Water Companies in Kenya.

2. LITERATURE REVIEW

The chapter looked at the applicable and relevant literature applicable to the study. The literature was assorted from journals, books, tabled papers, periodicals and selected internet sites. The chapter explores recent studies done and expected to provide a guide on determinants of performance Improvement in water companies in Kenya. The section further outlines theories that relates to the main objectives of the study; To determine the use of benchmarking as a tool of performance improvement in public water companies in Kenya; To find out the impact of the legal and regulatory framework (environment) in performance improvement of public water companies in Kenya; To establish the influence of ICT on the performance of public water companies in Kenya; To Establish the effects of staff managerial skills applied in public water companies in Kenya.

Theoretical Review:

Theoretical review involved anchoring the variables under review on specific theories. Theories lay the foundation upon which research is built. They provide a particular perspective or lens, through which a topic is examined. Cooper and Schindler (2011) defines a theory as a set of interrelated concepts, definition, prepositions that have been put forth to explain a scenario. The theoretical foundation for this study is informed by Contingency Theory, Resource Dependence Theory and Task Technology Fit Model (TTF).

Contingency Theory:

Contingency theory was widely used in researches on measuring the performance and effectiveness of an organization and it claims that there is no optimum method to systematize a firm and the organization structure of the company (Jesmin, 2012). In other words, contingency theory argues that the most appropriate structure for an organization is the

one that best fits a given operating contingency, such as technology (Jesmin, 2012). As every company faces its own set of internal and external constraints as well as special environmental incidents that effect in distinctive levels of environmental uncertainties, there is no one optimal organization design for every company because every company has different organizational culture and different perspective towards risk. Contingency approach to management finds its foundation in the contingency theory of leadership effectiveness by Fred Fielder (1890). Any theory of business corporate strategy must be a contingent strategy .There does not exist a strategy or set of strategies which are optimal for all businesses no matter what their resources and no matter no matter environmental circumstances they face.

This theory support the objective of benchmarking since it is give insight to organization on how they can measure organization performance and effectiveness of an organization. Benchmarking is a way of measuring an organization performance against another organization or past experiences to improve organization performance hence this theory enable organizations to choose an appropriate structure that best fits its operations. -Contingency approach to management is based on the theory that management effectiveness is contingent or dependent upon on interplay between the application of management behavior and specific situations .i.e the way you manage should change depending on the circumstances – one size does not fit all.

Resource Dependence Theory:

Resource Dependence Theory (RDT) is the study of how the external resources of an organization affect the behavior of the firm. The procurement of external resources is an important tenet of both the strategic and tactical management of any company. Nevertheless, a theory of the consequences of this importance was not formalized until the 1970s, with the publication of *The External Control of Organizations*. Resource Dependence Theory has implications regarding the optimal divisional structure of organizations, recruitment of board members and employees, production strategies, contract structure, external organizational links, and many other aspects of organizational strategy. Resource Dependence Theory is one of many theories of organizational studies regarding the behavior of organizations. In many ways, the predictions of Resource Dependence Theory are similar to those of transaction cost economics, but it also shares some aspects with institutional theory. Pfeffer and Salancik (1978) utilized the previous environmental literature to develop resource dependence theory. Resource dependence theory is based on the notion that environments are the source of scarce resources and organizations are dependent on these finite resources for survival. A lack of control over these resources thus acts to create uncertainty for firms operating in that environment. Organizations must develop ways to exploit these resources, which are also being sought by other firms, in order to ensure their own survival. Pfeffer and Salancik determined three factors that influenced the level of dependence organizations had on particular resources. First, the overall importance of the resource to the firm was critical in determining the resource dependence of the firm. Second, the scarcity of the resource was also a factor. The more scarce a resource was, the more dependent the firm became. Finally, another factor influencing resource dependence was the competition between organizations for control of that resource. Together, all three of these factors acted to influence the level of dependence that an organization had for a particular resource.

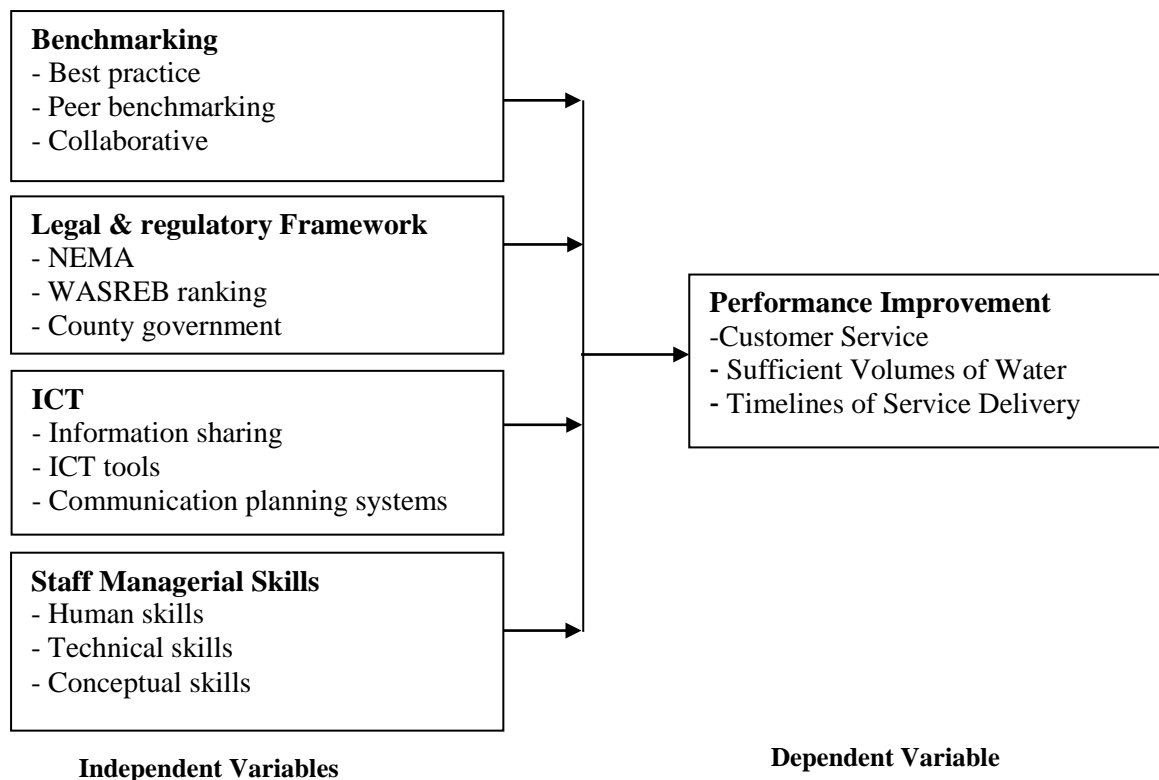
Task Technology Fit Model (TTF):

Task-Technology Fit (Gelderman 2012.) model holds that IT was more likely to have a positive impact on individual performance and can be used if the capabilities of IT match the tasks that the user must perform. TTF consists of eight factors: quality, locatability, authorization, and compatibility, ease of use/training, production timeliness, systems reliability, and relationship with users. TTF has been applied in the context of a diverse range of information systems.

According to (Kemper, 2012) technology acceptance is about how people accept and adopt some technology for use. User acceptance of technology has further been explained as the demonstrable willingness within a user group to employ IT for the tasks it is designed to support (Khalifa, 2013). Therefore acceptance can be viewed as a function of user involvement in technology use. Acceptance can be further described as the critical factor in determining the success or failure of any technology and acceptance has been conceptualized as an outcome variable in a psychological process that users go through in making decisions about technology (Venkatesh, v. et al. 2013). Technology is of little value, unless it is accepted and used (Oye, Iahad & Ab-Rahim 2012).

Therefore the understanding of technology acceptance is vital because the most important benefit associated with access to the new technologies is the increase in the supply of information (Suvama & Godavari 2012). This theory is linked to the objective of ICT by giving more insight on how ICT determine the performance improvement in Public Water Companies in Kenya.

Conceptual framework:



3. METHODOLOGY

Research Design:

Research design was the plan of action taken to gather information. It includes identifying the data gathering methods plus the instruments used (cooper & schindler 2014). The study employed descriptive research design since it portrays an accurate profile of situations (cooper 2014). This was to describe the characteristics of a particular phenomenon in a situation. It's used to obtain information concerning the current status of the industry.

Population of the study:

Population refers to the entire group of target objects, individuals or events having common observable characteristics. It is the aggregate of all that conforms to a given specification. In this case the target population was comprised of all registered Public Water Companies in Kenya. There are a total of 100 water companies in the Country with 65 being Urban and 35 rural Public Water Companies. The Public Water Companies that was considered in this study was only be those companies registered under the Umbrella Organization, the water service providers association. Therefore, the target population was 100 water companies registered by WAPSA. Hence the units of observation were the top managers of the public water companies in Kenya.

Data Collection Instruments:

The study utilized both primary and secondary data. Primary data was collected using a questionnaire while secondary data will be obtained from journals and unpublished academic thesis. A questionnaire is a well-established tool within social science research for acquiring information on participant social characteristics, present and past behavior, standards of behavior or attitudes and their beliefs and reasons for action with respect to the topic under investigation (Bulmer, 2012). Questionnaires were used since according to Cooper and Schindler (2011), they are effective data collection instruments that allow respondents to give much of their opinions in regard to the research problem. The research deployed both qualitative and quantitative methods in data analysis. According to Kothari (2010) this aid in understanding the main research theme more effectively as both methods complemented each other's deficiencies.

Data Collection Procedures:

Creswell (2013) defined data collection as a means by which information is obtained from the selected subjects of an investigation. The data collection procedure entailed dropping the questionnaire at the respondents' offices; explaining the purpose of the questionnaire and then the respondents were left alone to fill the questionnaire, which were collected later at an agreed upon time. This method assured a high response rate, accurate sampling, and minimum of bias, providing necessary explanations and gave the benefit of personal contact.

Pilot Testing:

The purpose of the pilot test was to refine the questionnaire so that respondents could have no problems in answering the questions and ensure there was no problem in recording the data. In addition, it enabled obtain some assessment of the question's validity and the likely reliability of the data that was collected. Preliminary analysis using the pilot test data can be undertaken to ensure that the data collected will enable the investigative questions to be answered (Saunders, Lewis and Thornhill 2012).

According to Mugenda (2003), a pretest sample ranges from 1% to 10% depending on the sample size hence 10% of the pretest sample was used. Therefore 10 questionnaires was piloted by issuing them to respondents who were not included in the final study sample.

Reliability of the Instrument:

Reliability refers to the consistence, stability, or dependability of the data. Whenever an investigator measures a variable, he or she wants to be sure that the measurement provides dependable and consistent results (Cooper & Schindler, 2014). In order to test the reliability of the instruments, the study used internal consistency measure known as Cronbach's Alpha. The alpha values range between 0 and 1 with reliability increasing with increase in value. Coefficient of 0.7 is commonly accepted rule of thumb that indicates acceptable reliability and 0.8 or higher indicate good reliability (Kothari, 2011).

Validity of the Instrument:

According to Mugenda and Mugenda (2003), validity is the accuracy and meaningfulness of inferences, which are based on the research results. Validity exists if the data measure what they are supposed to measure. This study used both construct validity and content validity.

For construct validity, the questionnaire was divided into several sections to ensure that each section assessed information for a specific objective, and also ensured that the same closely ties to the conceptual framework for this study. Respondents were asked to evaluate the statements in the questionnaire for relevance and whether they are meaningful, clear and polite. On the basis of the evaluation, the instrument was adjusted appropriately before subjecting it to the final data collection exercise. Their review comments was used to ensure that content validity was enhanced.

Data Analysis and presentation:

The process of data analysis involved data clean up and explanation. The data was then coded and checked for any errors and omissions (Kothari, 2010). Frequency tables, percentages and means will be used to present the findings. Responses in the questionnaires will be tabulated, coded and processed by use of a computer Statistical Package for Social Science (SPSS) version 23.0 programme for data analysis. This will be coupled with the content analysis on qualitative issues to generalize the results. Inferential statistics in form of regression analysis will used to test the relationships between the independent (Determinants) and dependent variables (performance improvement). The regression statistical model was in the form of

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon; \text{ where;}$$

Y = Performance Improvement

X₁ = Benchmarking

X₂ = Legal & regulatory Framework

X₃ = ICT

X₄ = Staff Managerial skills

β_0 = Constant in the Model (Intercept)

β = Regression coefficient (Slope)

ϵ = Error Term in the Equation

This chapter presents the findings and interpretation of the study. The study sought to investigate into the determinants of performance improvement of public water companies in Kenya. It specifically sought to; determine the extent to which benchmarking influences the performance improvement in Public Water companies in Kenya; to establish the influence of legal and regulatory framework on performance improvement in Public Water Companies in Kenya; to explore the extent to which ICT determine the performance improvement in Public Water Companies in Kenya and to establish how staff managerial skills influence the performance improvement in Public Water Companies in Kenya.

Response Rate:

The study administered 100 questionnaires to the respondents in order to collect the necessary data and 91 of the 100 questionnaires were filled in and returned; hence the response rate was 91%. This was possible through constant follow up with the respondents. Mugenda and Mugenda (2008) observed that a 50 percent response rate is adequate, 60 percent good and above, while 70 percent rated very good. The response rate of the study was therefore adequate.

Pilot Testing:

Reliability indicates the stability and consistency with which the data collection instrument measures the concept, (Zikmund, 2000). In this study, the reliability of the research instrument was checked through the use of the split-half reliability procedure.

Mugenda and Mugenda, (1999) define validity as the degree of consistency with which it measures a variable. Saunders (2000) also contends that research is valid only if it actually studies what it set out to study and only if the findings are verifiable. Mugenda and Mugenda (1999) contend that the usual procedure in assessing the content validity of a measure is to use a professional or expert in a particular field. The Cronbach alpha ranges from 0 – 1 and the closer to 1, the greater the consistency. The recommended value of 0.7 was used as a cut-off of reliabilities.

Reliability:

Independent variables	Reliability Cronbach’s Alpha	Comments
Benchmarking	0.958	Accepted
Legal & regulatory Framework	0.979	Accepted
ICT	0.867	Accepted
Staff Managerial Skills	0.768	Accepted
Average	0.893	Accepted

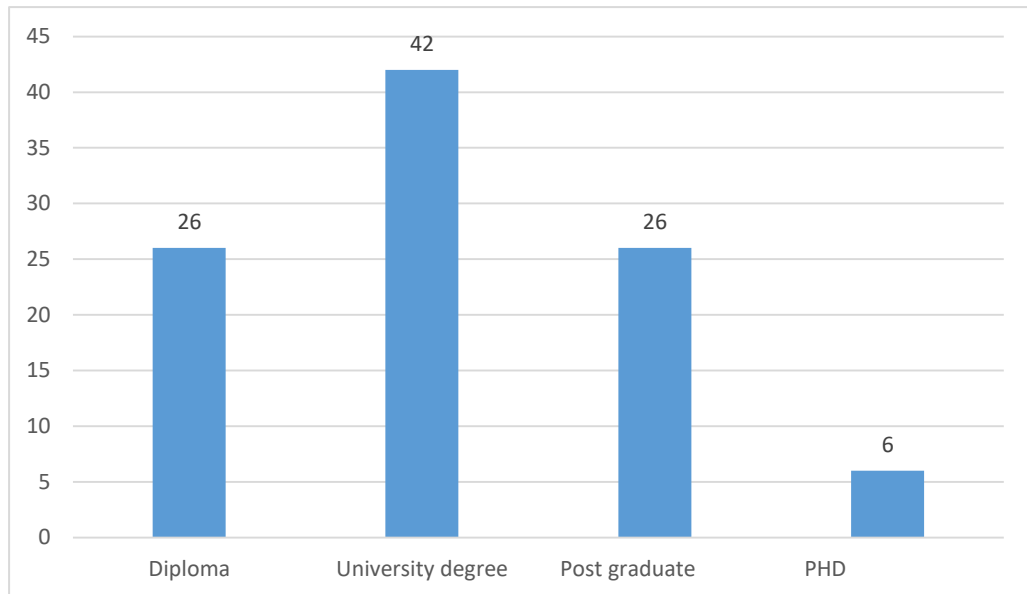
The overall reliability cronbachs alpha was 0.893 which is highly accepted since it was above the recommended alpha which 0.7. The figure 0.893 showed the stability and consistency of the data collection used (Zikmund, 2000).

Demographic Information:

The study sought to determine the demographic characteristics of the respondents based on academic qualification and experience and the findings are presented as follows:

Level of education of respondents:

The research also scrutinized the education level of the respondents; the findings are as presented in the figure 4.1. From the findings most of the respondents 42% had undergraduate level of education, 26% were post graduates while 26 % were diploma holders. According to Marten (2005) in a study on the success of Canadian small, he discovered that the education of employees is positively aligned to a performance improvement. Most of the respondents were educated, (past diploma level), which is supported by studies by King and McGrath (2004) who indicated that in today’s constantly fluctuating working environment, education is a crucial factor in positive performance of institutions.

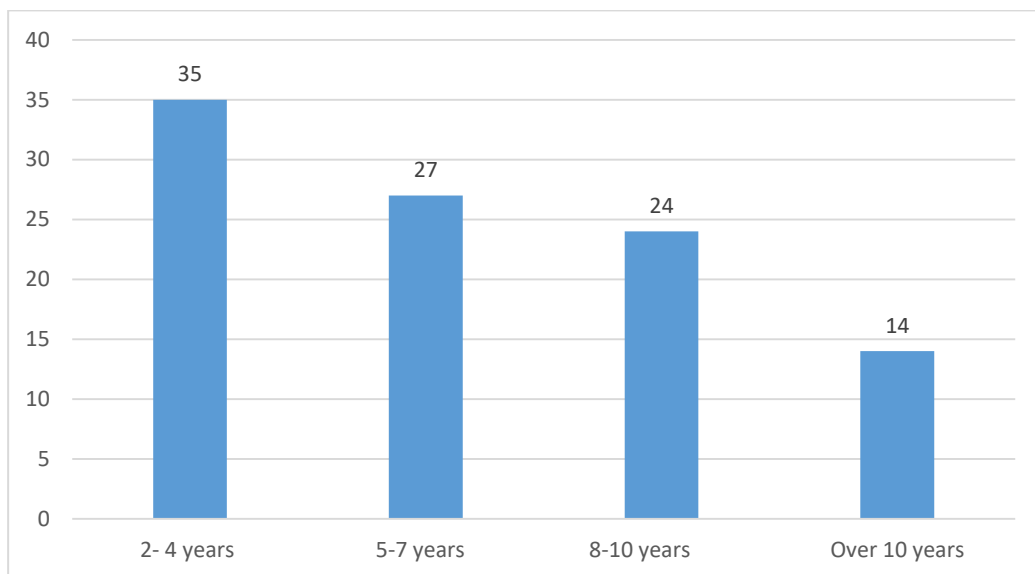


Respondents Level of Education

Duration respondents had worked in the public water company:

The study sought to find out the duration respondents had worked in the public water company. From the findings, majority of the respondents had worked for more than 2 years implying that they were well conversant with the information sought by the research.

Cattani, Pennings and Wezel (2003) argues that staff members who have been working for more than five years have enough expertise in the organizational and managerial practices in the organizations they are working for.



Respondents Duration at Work:

Study Variables:

The study sought to cover the following objectives; to determine the extent to which benchmarking influences the performance improvement in Public Water companies in Kenya; establish the influence of legal and regulatory framework on performance improvement in Public Water Companies in Kenya; explore the extent to which ICT determine the performance improvement in Public Water Companies in Kenya; and establish how staff managerial skills influence the performance improvement in Public Water Companies in Kenya.

Benchmarking:

Study findings revealed that respondents agreed that benchmarking should not only compare the outputs but also the process in which the output is obtained, where customer satisfaction always takes the center stage as shown by a mean of 4.10 and a standard deviation of 0.74; that benchmarking provides a starting point to determine where inefficiencies lie as shown by a mean of 3.98 and a standard deviation of 0.72; that benchmarking should provide the bench marker with a comprehensive study of the relative performance of all the participants then identified gaps between the organization and its peers as shown by a mean of 3.90 and a standard deviation of 0.54; that benchmarking should have particular goals of identifying world class performance levels, determine drivers of superior performance, quantity gaps between the bench markers performance and its peers, identifies best practices in key business processes, share knowledge of best practice and build foundations for performance improvement as shown by a mean of 3.80 and a standard deviation of 0.75; and that for benchmarking to succeed, it must be part of a continuous Improvement strategy rather than a standalone activity as shown by a mean of 3.61 and a standard deviation of 0.86.

According to Addo (2014) benchmarking should have particular goals of identifying world class performance levels, determine drivers of superior performance, quantity gaps between the bench markers performance and its peers, identifies best practices in key business processes, share knowledge of best practice and build foundations for performance improvement.

Benchmarking:

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean	Stdev
Benchmarking provides a starting point to determine where inefficiencies lie	0	7.3	4.9	70.7	17.1	3.98	0.72
For Benchmarking to succeed, it must be part of a continuous Improvement strategy rather than a standalone activity.	4.9	9.8	4.9	80.5	0.0	3.61	0.86
Benchmarking should not only compare the outputs but also the process in which the output is obtained, where customer satisfaction always takes the center stage	2.4	7.3	65.9	24.4	0.0	4.10	0.74
Benchmarking should have particular goals of identifying world class performance levels, determine drivers of superior performance, quantity gaps between the bench markers performance and its peers, identifies best practices in key business processes, share knowledge of best practice and build foundations for performance improvement	2.4	4.9	9.8	75.6	7.3	3.80	0.75
Benchmarking should provide the bench marker with a comprehensive study of the relative performance of all the participants then identified gaps between the organization and its peers	2.4	12.2	78.0	7.3	0.0	3.90	0.54

Legal and Regulatory Framework:

Extent to which Legal and Regulatory Framework affects performance improvement:

The research also investigated several dimensions of legal and regulatory framework which have led to performance improvement at the public water company.

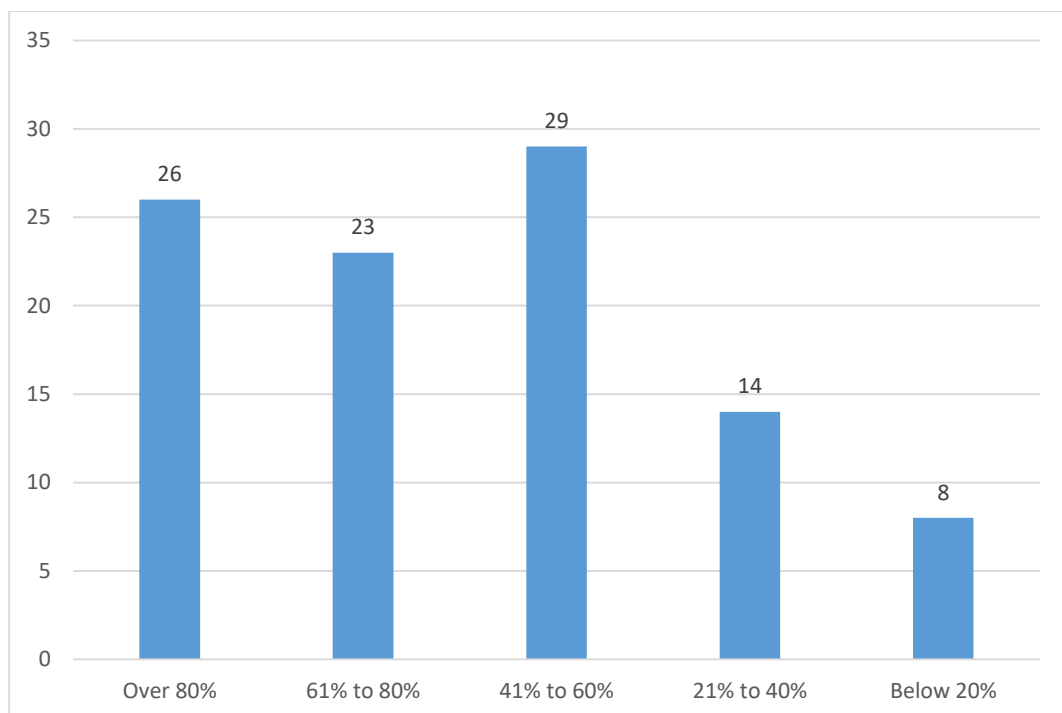
The findings on rating the extent several dimensions of legal and regulatory framework contributed to performance improvement at the public water company shows that WASREB monitors and documents the performance of public water companies as shown by a mean of 4.75 and a standard deviation of 0.14; that County Government bear the constitutional obligation of ensuring that water service companies are sustainable as shown by a mean of 4.64 and a standard deviation of 0.33; that legal & regulatory framework in an organization facilitate the smooth flow of work in the company as shown by a mean of 3.68 and a standard deviation of 0.37; and that NEMA regulates the water quality management as shown by a mean of 2.8 and a standard deviation of 0.25

Legal and Regulatory Framework:

	Very Large extent	Large extent	Moderate Extent	Low extent	No extent	Mean	Stddev
NEMA regulates the Water Quality Management	36	12	2	23	0	2.8	0.25
County Government bear the constitutional obligation of ensuring that water service companies are sustainable	80	10	4	6	0	4.64	0.33
WASREB monitors and documents the performance of public water companies.	83	12	2	3	0	4.75	0.14
Legal & regulatory Framework in an organization facilitate the smooth flow of work in the company	31	27	21	21	0	3.68	0.37

Whether legal and regulatory framework influences the performance improvement in Public Water companies:

The study sought to find out whether legal and regulatory framework influences the performance improvement in Public Water companies. Majority (29%) of the respondents indicated that legal and regulatory framework contributed to between 41% and 60% of performance improvement in Public Water companies, 26% over 80% and 23% between 61% and 80%.

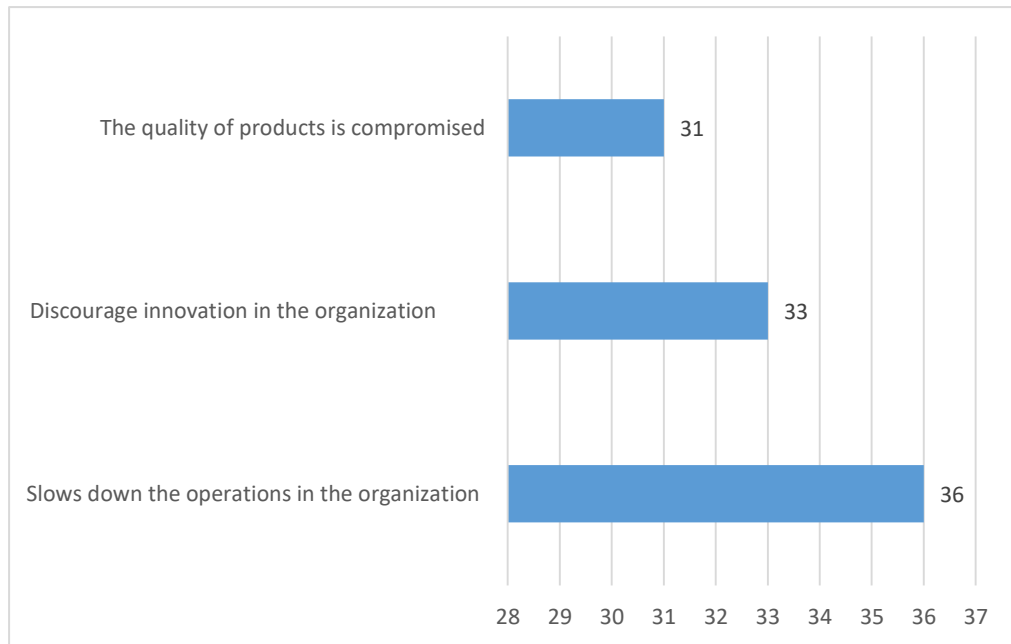


Legal and regulatory framework Influence:

Information Communication Technology:

Effect of obsolete technology on performance improvement in respondents' organizations:

As per the data analyzed, on the effect of obsolete technology on performance improvement in respondents' organizations 36% of the respondents agreed that obsolete technology allows down operations in the organization while 33% indicated that obsolete technology discourages innovation in the organization. The remaining 31% indicated that due to obsolete technology, the quality of products was compromised.



Effect of obsolete technology on performance improvement:

Extent to which ICT influences performance improvement:

The study sought to find out the extent to which ICT influences performance improvement.

From the findings on the extent to which ICT influences performance improvement, respondents agreed that communication planning systems ensure successfully transport of data within the company as indicated by a mean of 4.1 and a standard deviation of 0.78; that IT provides tools to enhance organization operations to consistently offer exemplary service delivery that may meet and exceed customer expectations and performance improvement as indicated by a mean of 4.1 a standard deviation of 0.84; that IT allows organizations to respond better to existing challenges and improve the anticipation of future developments of performance improvement as indicated by a mean of 3.6 and a standard deviation of 1.10 and that management of data and information enhance performance improvement in public water companies as indicated by a mean of 3.1 and a standard deviation of 1.10.

According to Brynjolfson et al (2012), ICT offers a wide range of business processes and improves information and knowledge management within the firm leading to better performance. They further posit that communication based on ICT and the internet improves external communication, increases coordination, speed and reliability of information processing leading to improved performance.

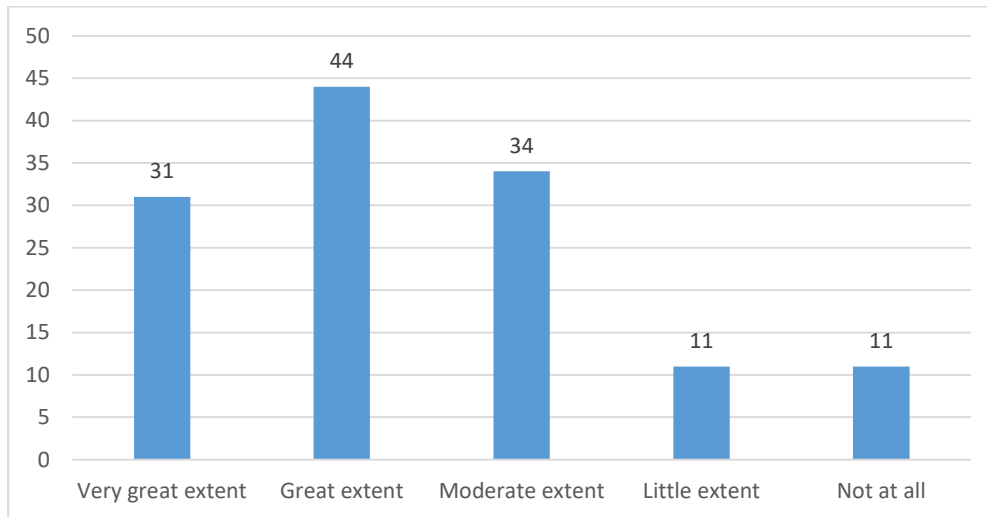
Extent to which ICT influences performance improvement:

	Very Large extent	Large extent	Moderate Extent	Low extent	No extent	Mean	Stdev
Management of data and information enhance performance improvement in public water companies	10.8	29.8	28.2	24.0	6.4	3.1	1.10
IT allows organizations to respond better to existing challenges and improve the anticipation of future developments of performance improvement.	21.6	43.8	16.0	12.6	4.8	3.6	1.10
IT provides tools to enhance organization operations to consistently offer exemplary service delivery that may meet and exceed customer expectations and performance improvement.	36.0	50.6	7.6	2.4	2.2	4.1	0.84
Communication planning systems ensure successfully transport of data within the company.	33.0	52.8	9.0	2.6	1.2	4.1	0.78

Extent to which information technology affects performance improvement:

Rating the extent to which information technology affects performance improvement.

The findings on rating the extent to which information technology affects performance improvement shows that 44% of the respondents agreed that information technology affects performance improvement to a great extent, 34% to a moderate extent, 31% to a very great extent, 11% to a little extent and 11% of them felt that it did not affect performance improvement at all.



Extent to which information technology affects performance improvement:

Staffs Managerial Skills:

Extent to which several dimensions of Staffs Managerial Skills contributed to performance improvement in Public Water companies:

Rating the extent to which several dimensions of staffs managerial skills contributed to performance improvement in Public Water companies. The research also investigated several dimensions of staffs’ managerial skills which have led to performance improvement in Public Water companies.

The findings on rating the extent to which several dimensions of staffs managerial skills contributed to performance improvement in Public Water companies shows that the staff are involved in the implementation of strategies as shown by a mean of 3.9 and a standard deviation of 1.09; the staffs have the knowledge about the performance improvement in the public water companies as shown by a mean of 2.9 and a standard deviation of 0.94; the staffs have the ability to understand the concepts of performance improvement in the companies as indicated by a mean of 3.5 and a standard deviation of 1.04; and that the staffs have the ability to interact with each other and motivate one another as shown by a mean of 3.5 and a standard deviation of 1.08.

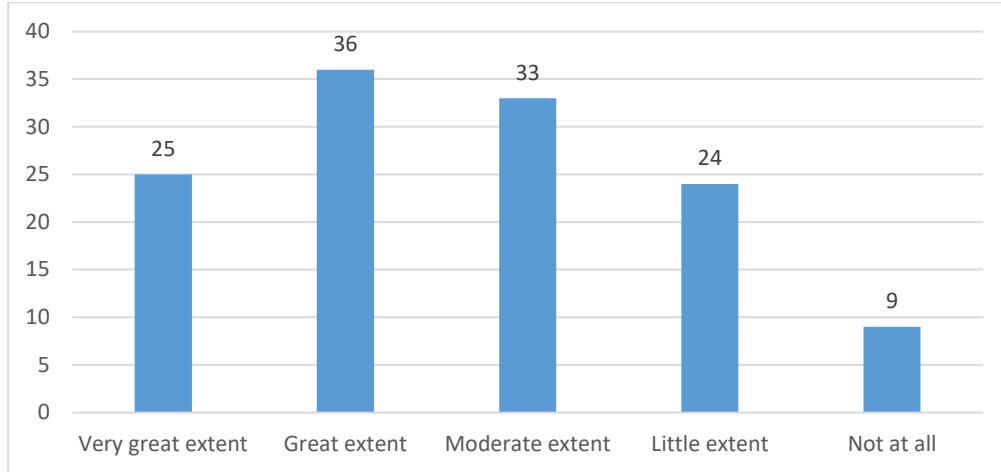
Mutavi (2016) also found out that employee involvement, norms and values and organizational artifacts had a positive influence on the performance of water companies.

Effect of Staffs Managerial Skills on Performance Improvement:

	Very Large extent	Large extent	Moderate Extent	Low extent	No extent	Mean	Stdev
The staffs have the ability to interact with each other and motivate one another.	16.4	41.2	24.2	13.2	4.2	3.5	1.04
The staffs have the knowledge about the performance improvement in the public water companies.	7.2	17.8	36.2	36.8	1.0	2.9	0.94
The staffs have the ability to understand the concepts of performance improvement in the companies	17.8	41.2	22.8	13.8	3.4	3.5	1.04
The staffs are involved in the implementation of strategies	32.4	47.2	8.2	4.4	6.8	3.9	1.09

Extent to which staff managerial skills influences the performance improvement in public water companies:

The study sought to find out the extent to which staff managerial skills influences the performance improvement in public water companies. According to the findings, 36% of the respondents agreed that staff managerial skills influences the performance improvement in public water companies to a great extent, 33% to a moderate extent, 25% to a very great extent, 24% to a little extent and 9%, none at all. .

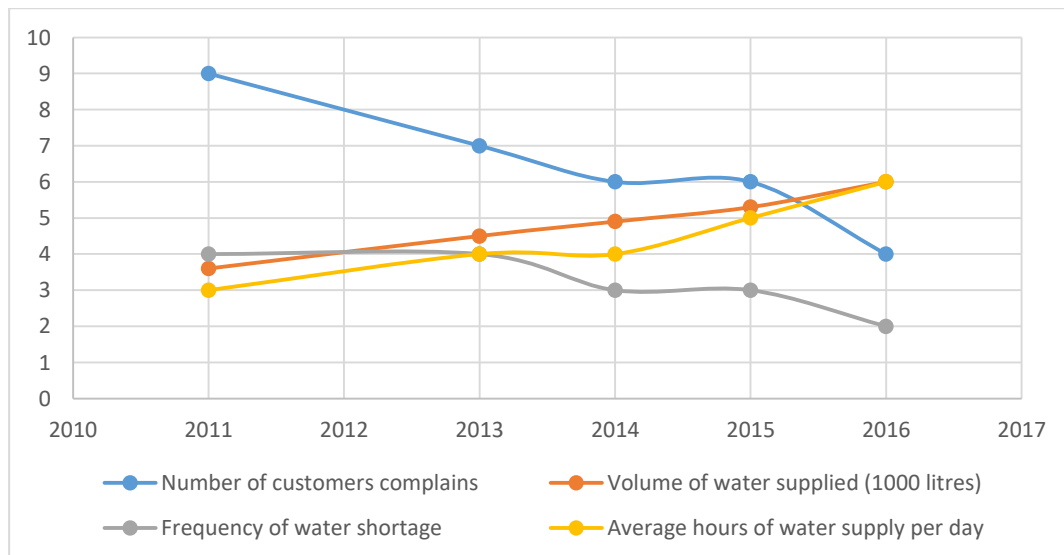


Influence of staff managerial skills influences on the performance improvement in public water companies:

Performance Improvement:

Measures of Performance Improvement:

From the findings, there was a steady improvement in the performance of Public Water companies in Kenya. This was evidenced by the steady decline in the number of customer complains during the five years from 2011 to 2016. The frequency of water shortage also declined from 2013 to 2016. Further, performance improvement was evidenced by an increase in the average hours of water supply per day as well as an increase in the volume of water supplied daily in the same years 2013 to 2016.



Measures of Performance Improvement:

Regression Analysis:

A multiple regression model was fitted to determine whether independent variables notably; X1 is Benchmarking, X 2 is Legal & Regulatory Framework , X 3 is Information Communication and Technology and X 4 is Staff Managerial Skills influence the dependent variable Y which was performance improvement.

Model summary:

Benchmarking, legal & regulatory framework, information communication and technology and staff managerial skills were found to be satisfactory variables in the performance improvement of public water companies. This was supported by the coefficient of determination known as the R – squared of 0.793. This means the four independent variables explain 79.3% of variations in the dependent variable. These results further mean that the model applied to link the relationship of the variables was satisfactory as shown in the table.

Regression Model:

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.890a	.793	.783	.36563

Analysis of Variance (ANOVA):

The results in the table 4.7 below indicated that the model was statistically significant. The results imply that benchmarking, legal & regulatory frameworks, ICT and staff managerial skills were good predictors of performance improvement. This was supported by an F- statistics of 87.853 which was greater than the f- critical of 3.23 with a level of significance of 0.000 which was less than the conventional probability 0.05 significance level.

ANOVA:

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	46.979	4	11.745	87.853	.000 ^a
	Residual	12.299	92	.134		
	Total	59.278	96			

Beta Coefficients:

The results shows that benchmarking had a positive and significant effect on performance improvement (r= 0.349, p= 0.032) meaning a unit increase in benchmarking will lead to a 0.349 increase in the performance improvement. Legal & regulatory framework had a positive and significant effect on performance improvement(r=0.687, p= 0.005) which mean a unit increase in legal and regulatory framework will lead to a 0. 687 increase in performance improvement. ICT had a positive and significant effect on performance improvement (r= 0.970, P= 0.013) meaning a unit increase in ICT will lead to a 0.970 increase in performance improvement. Staff managerial skills had a positive and significant effect on performance improvement(r= 1.091, P 0.159) meaning a unit increase in staff managerial skills will lead to a 1.091 increase in performance improvement.

Beta Coefficients:

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
	Benchmarking	0.349	0.210	0.297	0.069	0.032
	Legal and Regulatory Framework	0.687	0.085	0.455	0.139	0.005
	ICT	0.970	0.145	0.326	0.097	0.013
	Staffs Managerial Skills	1.091	0.159	0.897	0.107	0.042
	(Constant)	3.463	.450		7.693	0.000

The specific model was

$$Y = 3.463 + 1.091X_1 + 0.970X_2 + 0.687X_3 + 0.349 X_4$$

4. SUMMARY OF FINDINGS

Benchmarking:

Study findings revealed that benchmarking should not only compare the outputs but also the process in which the output is obtained, where customer satisfaction always takes the center stage; that benchmarking provides a starting point to determine where inefficiencies lie; that benchmarking should provide the bench marker with a comprehensive study of the relative performance of all the participants then identified gaps between the organization and its peers; that benchmarking should have particular goals of identifying world class performance levels, determine drivers of superior performance,

quantity gaps between the bench markers performance and its peers, identifies best practices in key business processes, share knowledge of best practice and build foundations for performance improvement; and that for benchmarking to succeed, it must be part of a continuous Improvement strategy rather than a standalone activity.

Legal and Regulatory Framework:

The findings revealed that WASREB monitors and documents the performance of public water companies; that County Government bear the constitutional obligation of ensuring that water service companies are sustainable; that Legal & regulatory Framework in an organization facilitate the smooth flow of work in the company; and that NEMA regulates the Water Quality Management. It was also found out that legal and regulatory framework contributed to between 41% and 60% of performance improvement in Public Water companies.

Information Communication Technology:

From the findings, it was found out that obsolete technology allows down operations in the organization; it discourages innovation in the organization and that due to obsolete technology, the quality of products usually gets compromised. Further, it was found out that communication planning systems ensure successfully transport of data within the company; that IT provides tools to enhance organization operations to consistently offer exemplary service delivery that may meet and exceed customer expectations and performance improvement; that IT allows organizations to respond better to existing challenges and improve the anticipation of future developments of performance and that management of data and information enhance performance improvement in public water companies. It was therefore found out that information technology affects performance improvement to a great extent.

Staffs Managerial Skills:

On staffs managerial skills, the study found out that the staff are involved in the implementation of strategies; that the staffs have the knowledge about the performance improvement in the public water companies; that the staffs have the ability to understand the concepts of performance improvement in the companies; and that the staffs have the ability to interact with each other and motivate one another.

Performance Improvement:

The study also found out that there was a steady improvement in the performance of Public Water companies in Kenya. This was evidenced by the steady decline in the number of customer complains during the five years. The frequency of water shortage also declined. Further, performance improvement was evidenced by an increase in the average hours of water supply per day as well as an increase in the volume of water supplied daily.

Conclusion of the Study:

The Study Concludes that benchmarking should not only compare the outputs but also the process in which the output is obtained, where customer satisfaction always takes the center stage and that benchmarking provides a starting point to determine where inefficiencies lie by providing the bench marker with a comprehensive study of the relative performance of all the participants then identified gaps between the organization and its peers.

The study also concludes that staff's managerial involvement in the implementation of strategies, staffs knowledge about the performance improvement in the public water companies, staffs ability to understand the concepts of performance improvement in the companies and staffs have the ability to interact with each other and motivate one another affects performance of water companies significantly.

On the factors affecting performance of water companies, the study concludes that Staffs Managerial Skills, Legal and Regulatory Framework, ICT and Benchmarking the study concludes that staff management Contribute most to performance of water companies followed by ICT, Legal framework and lastly Benchmarking. All the four factors were positive and significantly related to performance of water companies.

Recommendations of The study:

The study recommends that staffs should be involved in the implementation of strategies that staffs should have knowledge about the performance improvement in the public water companies that staffs should have the ability to understand the concepts of performance improvement in the companies and that staffs should have the ability to interact with each other and motivate one another since this affects performance of water companies significantly.

The study also recommends thorough check on ICT before Launching any ICT related project in water companies since the availability of ICT does not necessarily lead to success. On the contrary, it requires that firms accompany innovation with the development of best organization practices. It is therefore necessary to study and confirm the influence of ICT on performance improvement. ICT offers a wide range of business processes and improves information and knowledge management within the firm leading to better performance.

The main weakness of the Water Act 2002 is that there are no rules to make it operational. The study recommends ensuring that there exist rules that governs the company and followed strictly. The study also noted that funds influences performance of WASREB as a regulator in the water services sub-sector. Funding improved the services of the institutions and ensured smooth processes of the daily activities in the offices. Water Company should therefore seek to get more funding to run the operations thereby increasing efficiency.

Areas for further studies:

The study was done to examine the Determinants of Performance Improvement of Public Water Companies in Kenya .Further research should be done to find out the challenges that comes with implementation of determinants of performance of water companies.

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