



INFLUENCE OF INSTITUTIONAL FACTORS ON SERVICE DELIVERY IN WATER CORPORATIONS IN KENYA. A CASE OF KACUWASCO

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ABSTRACT

This study focused on institutional factors influencing service delivery at Kakamega county urban water and sanitation corporation. The theories underpinning the study were system theory, equity theory and contrast theory. The study utilized simple random sampling technique to select the sample. The target population was 178 from Kakamega county urban water and sanitation corporation employees which included top management, middle level and other employees. A sample size of 125 employees were selected. The researcher administered 125 Structured questionnaires for data collection and received back 100 dully filled questionnaires representing 80% response rate. The study generated data from questionnaire and analyzed using Statistical Package for Social Science (SPSS) software and the findings presented using descriptive statistics such as frequencies and percentages. The study finally gave recommendation and areas for further studies. The study recommended that the corporation should sufficiently offer relevant training on management competency. Secondly the study recommended training programs plant machine uses and maintenance, the corporation to enhance its strict adherence to the budget in fund utilization as this would enhance appropriate revenue allocation and collection to meet the operational cost of the urban water and sanitation corporation. Lastly, the corporation should advance their training techniques with respect to the changing technology as service delivery should be highly supported by ICT infrastructures and make the interaction between the company and the clients be fast, convenient and reliable.

Key Words: Management Competency, Asset Management, Financial Utilization, Information Technology, Service Delivery

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INTRODUCTION

Service delivery is oftenly meant to be associated with the ability to provide certain utilities to the public which are not limited to water, electricity, housing and land. Water service providers are mandated to ensure provision of effective and efficient water service delivery, in the right quantity and quality, and timely to their customers (Tifow, 2014). Most countries in the world have to contend with the challenges associated with delivery of water services to the expectation of the consumers which is a big hinderance to both social and economic development.

The United Nations declared an increase of the proportion of people who do not access clean water and basic sanitation as one of the international goals. Lack of access to clean water is extremely severe leading to more than five million people dying from water related diseases and the other one billion die due to inaccessibility of water as a basic need (WHO, 2011).

In Europe, Rural Turkey has faced greater issues of access to safe water and sanitation. Despite this, substantial gains have been made with access to basic sanitation increasing to 76% by 2011. Those numbers represent thousands of people whose lives have been improved by the simple investment of sanitation improvements. About 90% of Turks now have access to improved water sources and some level of sanitation infrastructure (Tereza, 2011).

Water supply system investments in Kenya has for a long time avoided those areas settled by the poor in urban centers as much focus is on the middle to high income areas for quick returns. Water supplies to peri-urban areas where settlement is not formal is plagued with many problems such as unplanned nature of settlement, hence inadequate infrastructure including roads, water, sanitation, sewerage, drainage, and electricity situation that characterizes very low levels of public services and as

a result clean water, adequate sanitation, and hygiene are visibly substandard or nonexistent altogether.

The continuing expansion of settlements demand of water emanates from relatively high population growth. Lack of adequate rainfall has contributed to inability to get enough food thus leading to eruptions of violence in Kenya. In many areas, the problem of water shortage has been contributed by the government's lack of investment in water, especially in remote areas. The majority of poor Kenyans in urban centers usually access only polluted water, which has caused cholera epidemics and other opportunistic diseases which have a negative impact to their health and livelihood (Kianna, 2014).

Bellaubi and Visscher (2010) in their study on enhancing integrity to improve service delivery in water supply service provision in both Kenya and Ghana observed that deep seated challenges exist in water supply in both countries. They observed that water crises in 2009, 2006, and 2000 have not yet catalyzed government and service providers to act together to address long-term challenges, and with uneven distribution of water resources and a high level of aridity (80 percent of Kenya's land area is arid or semi-arid) the problem of raw water availability was likely to increase. The study revealed that by 2006 only 42% of Kenya had supply of water while 31% had sanitation and sewerage coverage both in metropolitan and remote areas against a target of 76% in both areas. Despite high levels of scarcity of water, the very little that is available does not reach the intended public in the expected time and in the expected quantities due to cartels and the numerous inefficiencies in the service delivery. amongst the sited challenges are unnecessary disconnections from supply, erratic bills, delayed complaint resolution.

According to (Khan, 2010) Kenya is facing big challenges with regards to water and sanitation where 23,000 deaths result annually and urgent

attention is needed to meet its national and international commitments. It is essential that water and sanitation facilities are available in schools and health centers, with separate facilities for male and female, and proportionate facilities for disabled people, all times of the year, at all levels (Kenya Water and Sanitation Network, 2013).

Kakamega is one of the counties experiencing scarcity of water and sanitation services. The county faces serious challenges with regards to protection of water resources, development of water infrastructure, adoption of appropriate technologies and sustainable provision of water and sanitation facilities. (County Water Supply and Urban Sewerage Strategic Plan 2015-2019).

Statement of the Problem

In Europe, Rural Turkey has faced greater issues of access to safe water and sanitation and about 90% of Turks now have access to improved water sources and some level of sanitation infrastructure (Tereza, 2011). In Bangladesh-Asia research indicates that more than 2 half of acute illnesses are attributed to water, sanitation and hygiene-related across all age groups (BRAC 2013). In Africa, Ghana's sanitation coverage still remains low, where only 18% and 7% of the urban and rural population respectively use unimproved sanitation facility. Lack of access to improved water and sanitation facilities and poor hygiene practice in Rwanda, particularly in rural area, is contributing to high incidences of water, sanitation hygiene related mortality (UN Agency, 2014). The majority of poor Kenyans in urban centers usually access only polluted water, which has caused cholera epidemics and other opportunistic diseases which have a negative impact to their health and livelihood (Kianna, 2014). Lack of adequate rainfall has contributed to inability to get enough food thus leading to eruptions of violence in Kenya.

Bellaubi and Visscher (2010) in their study on enhancing integrity to improve service delivery in

water supply service provision in Kenya observed that deep seated challenges exist in water supply in most developing countries. They observed that water crises in 2009, 2006, and 2000 have not yet catalyzed government and service providers to act together to address long-term challenges, and with uneven distribution of water and sanitation services.

There has been public outcry in Kenya about poor performance of water service providers in service delivery. Performance of many water companies is far much below the expectation of the customers (Naidoo, 2010). In spite of numerous progress reports on water service delivery much is to be done, since there is increasing outcry and contestation of outcomes amongst various communities in the recent times. This gives a clear indication that different interventions are required to address the need to access to basic services.

Most of the water service providers are rated by the regulator on performance in terms of technical aspects of the key performance indicators which include water coverage, sanitation coverage, metering levels, revenue collection, Non-revenue water, staff productivity and hours of supply (WASREB impact report 2018). This has led to very little emphasis demonstrated with regard to enhancing high standards of service levels whereas much effort is directed on infrastructure development.

The county faces serious challenges with regards to efficiency in service delivery which is attributed to dilapidated water infrastructure, failure of adoption of appropriate technologies and sustainable provision of water and sanitation facilities. (County Water Supply and Urban Sewerage Strategic Plan 2015-2019). Hence the study aims at finding out influence of institutional factors on effective service delivery in Kakamega county water and sanitation company. There is a need to have improved provision of water services for the people thus the need for the research. It may help to achieve the 6th sustainable

development goal that aims at ensuring availability and sustainable management of water and sanitation for all (SD Solutions Network, 2015).

Research Objectives

- The main objective of this study was to determine the factors influencing service delivery in kakamega county urban water and sanitation corporation. The specific objectives of this study were:
- To establish the influence of management competency on service delivery in kakamega county urban water and sanitation corporation.
- To determine the influence of asset management on service delivery in kakamega county urban water and sanitation corporation.
- To determine the influence of financial utilization on service delivery in kakamega county urban water and sanitation corporation.
- To determine the influence of adoption and implementation of information technology on service delivery in kakamega county urban water and sanitation corporation.

The study was guided by the following Hypotheses;

- **H₀₁:** Management competency has no influence on service delivery in kakamega county urban water and sanitation corporation.
- **H₀₂:** Asset management has no influence on service delivery in kakamega county urban water and sanitation corporation.
- **H₀₃:** Financial utilization has no influence on service delivery in kakamega county urban water and sanitation corporation.
- **H₀₄:** Implementation of Information technology implementation has no influence on service delivery in kakamega county urban water and sanitation corporation.

LITERATURE REVIEW

System Theory

The view of organizations as open social systems that must interact with their environments in order to survive is known as the systems theory approach. Organizations depend on their environments for several essential resources: customers who purchase the product or service, suppliers who provide materials, employees who provide labor or management, shareholders who invest, and governments that regulate. According to Cutlip, Center, and Broom, (2006), public relations' essential role is to help organizations adjust and adapt to changes in an organization's environment.

The open-systems approach was first applied by Katz and Kahn (1966), who adapted General Systems Theory to organizational behavior. This approach identifies organizational behavior by mapping the repeated cycles of input, throughput, output, and feedback between an organization and its external environment. Systems receive input from the environment either as information or in the form of resources. The systems then process the input internally, which is called throughput, and release outputs into the environment in an attempt to restore equilibrium to the environment. The system then seeks feedback to determine if the output was effective in restoring equilibrium. As can be seen, the systems approach focuses on the means used to maintain organizational survival and emphasize long-term goals rather than the short-term goals of the goal-attainment approach.

Equity Theory

Equity theory argues that whatever one is rewarded should be directly proportional to the investment undertaken or efforts put to it. This theory was first researched by Stouffer and his colleagues in military administration. They referred to equity as the reaction to state of disparity between what an individual that tends to be the actuality and

what he perceives to be true, In other words, the equity concept suggests that the ratio of outcomes to inputs should be constant across participants in an exchange. As applied to customer satisfaction research, satisfaction is achieved the customers receive what is proportionate to what they input.

Equity Theory – Criticism amongst the many theories that have studied the rationale of service delivery on customer satisfaction, equity appears to have a minimal effect on customer satisfaction and hence has an effect on the post-purchase communication behavior from expectations will be exaggerated in the direction of discrepancy. If the firm raises expectations in his advertising, and then a customer's experience is only slightly less than that promised, the product/service would be rejected as totally unsatisfactory. Conversely, under-promising in advertising and over-delivering will cause positive disconfirmation also to be exaggerated.

Contrast Theory – Criticism Several studies in the marketing literature have offered some support for this theory. The contrast theory of customer satisfaction predicts customer reaction instead of reducing dissonance; the consumer will magnify the difference between expectation and the performance of the product/service.

Resource Based View Theory

Resource-based view theory was developed by Barney (1991). This theory states that a company must have valuable, rare, inimitable and non-substitutable resources to have a sustainable competitive advantage and that these resources include everything internal to the firm. The application of this theory to human resource management illustrates the role that employees play in building a company's competitive advantage. Human resource possesses valuable knowledge, rare skills and inimitable talent.

Resource-based view (RBV) is a managerial framework used to determine the resources with the potential to deliver competitive advantage to a firm.

The exploitation of these resources leads to competitive advantage. Resource-based view is a model that sees resources as key to superior firm performance hence service delivery. There is a growing acceptance of internal resources as a source of competitive advantage. These resources include human resource which are important to a firm's success.

Employees are able to create a sustainable competitive advantage of a firm (Olalla, 1999). This author states that human resource possesses crucial attributes such as knowledge, skills, know-how and talent. The resource-based view theory supports the variable employee retention because it is important for firms to stay long with the employees that they have invested in so that they can have a competitive advantage in the industry hence good service delivery.

Empirical Review

Hudson (1993) demonstrates that the an employees productivity can be attributed to factors like , the personal attitude; behavior towards business and life, experiences acquired, talent and the level of education of an individual. it is therefore worth noting that an organization will meet the set objectives based on its ability to invest in the its employees capability.

According to Hitt, Bierman, and Kochhhar (2001), in order to achieve organization objectives the employees capabilities and effectiveness need to be reviewed frequently for purposes of keeping track on performance measurement hence for purposes of realization of growth and productivity of an organization ,the organization has to zero in into realization of the employees capability to enable them improve on their knowledge ,skills that translates to effectiveness.

Mpofu and Hlatywayo (2015) clearly outlines that training and development is key tool that enhances basic service delivery of an institution . The study

findings revealed that more improved effective service delivery was likely to be achieved if employees were effectively trained, and in turn there would be improved provision of services to the communities. Following these observations, this study aimed at testing the null hypothesis,

H₀₁: Management competency has no influence on service delivery in kakamega county urban water and sanitation corporation.

Dilapidated water infrastructure is rapidly failing due to lack of using smart network modelling technology that leads to effective management of critical water infrastructure which ensures maintenance of the desired level of service delivery. (Boulos, 2017) In Kenya, the success or failure of water supply highly depends on the existing water infrastructure. The existence of poor water infrastructure in most water service providers in the parts of the country, is a major challenge that compromises the effective water delivery to the consumers. Water is mostly lost through serious leakages and burst which also compromises the quality that gets to the customer and also the unnecessary water interruption occasioned by the major bursts to facilitate repairs

Antonio (2005) research on European response to the challenges of water and sanitation in developing countries by noting that the failure of the water and sanitation management systems is attributed to the archaic infrastructure which is still being utilized in the water sector. Most cities and towns in developing countries have not been able to replace most of the aging water pumps, pipes and motors, which have been in operation without adequate maintenance even after their lifespan lapsed.

Upgrading of the water treatment plants could also reduce the cost of maintenance and unaccounted for water hence making better use of large water volumes. The researcher further recommended that for better management and efficient service delivery, organizations should provide demand driven services

which aim at changing customer needs into services hence increased customer satisfaction (Kibwage et al., 2010).

This study aimed at testing the null hypothesis *H₀₂: asset management has no influence on service delivery in kakamega county urban water and sanitation corporation.*

Financial utilization is critical in the smooth running of any organization including water service providers to put into place new infrastructure and rehabilitation of existing ones. This helps maintain service quality over time (Angel, 2009). The effective operation and maintenance (O & M) of water supply systems and sanitation is a key element. This becomes successful if financing resources available and frequent supports are provided (Binder, 2008). Budgeting sufficient funding for rural water supply systems and sanitation is an important issue for sustainability and proper maintenance but not the only one.

Financing is always a problem especially for government organizations. It is more severe in developing countries especially in poor regions. Progress towards achieving water and sanitation for water supplying organizational targets has been disappointing due to insufficient and poor management of financial resources (WHO-UNICEF (2008). For all Kenyans to have access to clean and adequate water and sanitation, significant increase in financing is required (Ministry of Water and Irrigation, 2014).

The in-cash resources include financial contributions from communities, grants from local authorities and governments, donations from individuals and bank loans. The in-kind resources comprise of community's contribution in terms of labour, in kind material donations by community and other donors, such as building material, machinery, and in kind intellectual services such as know-how, monitoring, impact assessments, and space such as office space

(Cuthbert, 2011). This study aimed at testing the null hypothesis

H₀₃: Financial sources has no influence on service delivery in kakamega county urban water and sanitation corporation.

Information and Communication Technology (ICT) refer to a myriad of standalone media, including telephone and mobile telephony, radio, television, video, tele-text, voice information systems and fax, as well as computer mediated networks that link a personal computer to the internet, (Matambalya, 2000). ICT is an integrated system that incorporates the technology and infrastructure required to store, manipulate, deliver and transmit information, the legal and economic institutions required to regulate ICT access and usage, and the social and inter-personal structures which allow information to be shared, facilitate access to the ICT infrastructure, and through which innovation takes place (Wangwe 2007).

Campbell's (2002) New Zealand study investigated the socio-cultural impacts of ICTs on immigrants, the majority of whom were "relatively well-off". The study found that most of the immigrants who participated in the study reported using ICTs frequently for both word processing and accessing the Internet. This clearly indicates that the group of immigrants who responded was among the adopters of ICTs and had a high access level to the technologies. Another study by Chonia (2002) highlighted some of the problems facing many immigrants when they adjust to life in Switzerland where ICTs are part of daily living. Poor literacy, lack of local information, inadequate language skills as well as immigrants' cultural background were identified as the main barriers that prevent immigrants from adopting ICTs.

Ndou (2004) quoting Kaufman (1977) observes, "the traditional bureaucratic paradigm, characterized by internal productive efficiency, functional rationality,

departmentalization, hierarchical control and rule-based management is being replaced by competitive, knowledge based requirements, such as: flexibility, network organization, vertical/horizontal integration, innovative entrepreneurship, organizational learning, speed up in service delivery, and a customer driven strategy, which emphasize coordinated network building, external collaboration and customer services" all of which are supported by ICT. This study aimed at testing the null hypothesis

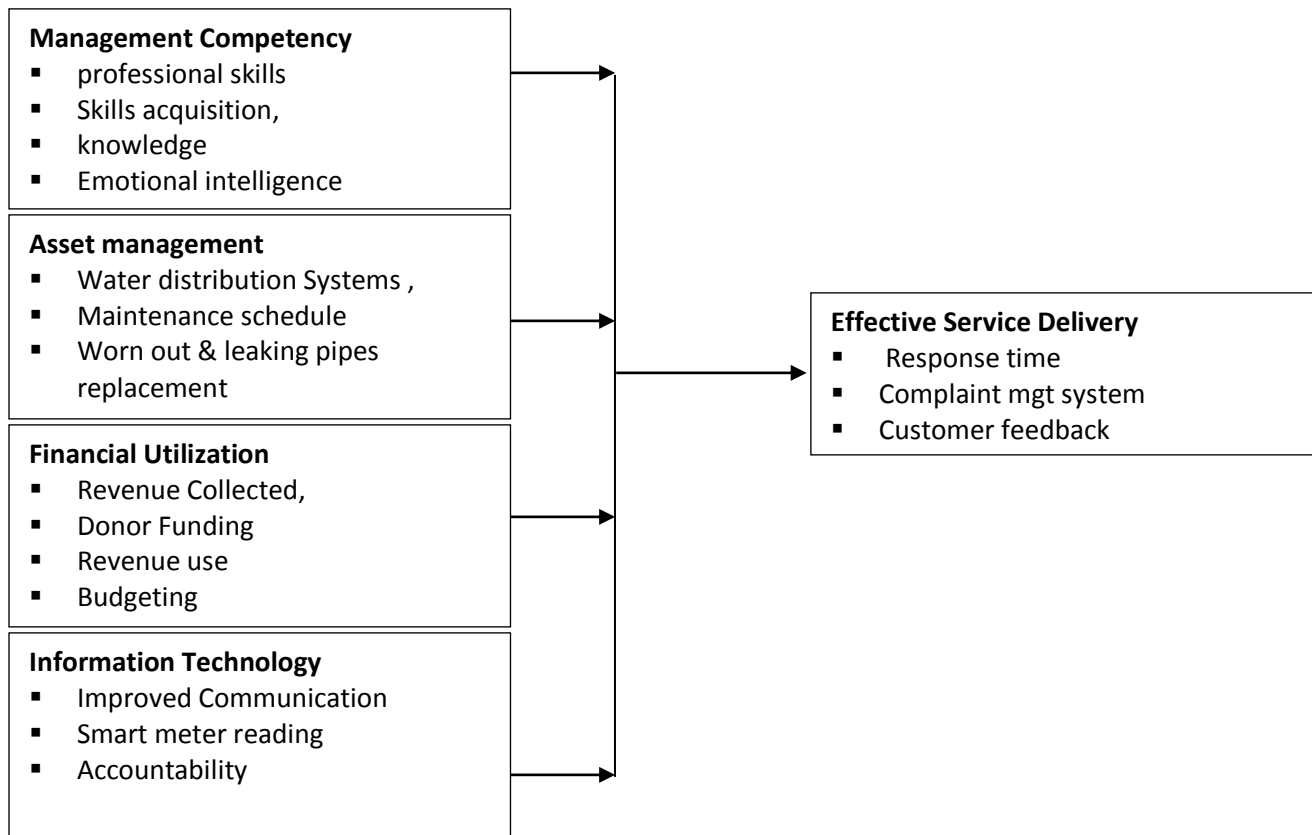
H₀₄: implementation of information communication technology has no influence on service delivery in kakamega county urban water and sanitation corporation

Jackson and Eunice (2014) Effectiveness is the ability of a person, function or organization to accomplish a given goal, purpose. Effectiveness is considered as the means of doing the right thing. Municipal Research and Services Centre (2013) defines effective service delivery as the actual producing of a service such as collecting refuse and disposing it or lighting the streets. Whitaker (2010) concurs with this argument and observes that depending on the kind of service being offered, each service has a primary intervention of transforming the customer and that the client himself or herself is the principle beneficiary. Whether it is learning new ideas or new skills (education), acquiring healthier habits (health), or changing one's outlook on family or society (social services), only the individual served can accomplish the change. He or she is a vital co-producer of any personal transformation that occurs (Whitaker, 2010).

The service provider or agent can only use his or her skills and conduct activities to facilitate the process. Whitaker further insists that in delivering services, the agent helps the person being served to make the desired sorts of changes by supplying encouragements, suggesting options, illustrating techniques, and providing guidance and advice but

the agent alone cannot bring about the change. Both the citizen and the agent together produce the desired transformation (Whitaker, 2010). In this study,

effective Service delivery was measured by Water and sanitation services.



Independent Variable

Dependent Variable

Figure 1: Conceptual Frame work

METHODOLOGY

This study adopted a descriptive case study research design since it explained the relationship between the study variables. The target population of the study was drawn from 178 employees of Kakamega County Urban Water and Sanitation Corporation. (KACUWASCO Staff establishment, 2019). The sampling frame was derived from Kakamega County Urban Water and Sanitation Corporation. The sample size was 125 employees which represented 70.2% of the total population. The instrument used in this study for data collection was the questionnaire. The study used descriptive and inferential statistics in analyzing data.

RESULTS

The findings were measured on a 5-point Likert scale with 5 – Strongly Agree; 4 - Agree; 3 - Undecided; 2 – Disagree; 1 – Strongly Disagree.

Influence of management competency on service delivery in kakamega county urban water and sanitation corporation.

The first objective of the study was to determine the influence management competency on service delivery of the corporation. The staffs were asked to indicate the aspect of management influencing service delivery at the corporation and the results were as shown in Table 1 below.

Table 1: Management Competency

Management competency	Strongly Agree	Agreed	Undecided	Disagreed	Totally Disagreed	Mean	SD
I have attended training to enhance my management skills	44 (44.0%)	41 (41.0%)	3 (3.0%)	8 (8.0%)	4 (4.0%)	4.13	1.070
I feel sufficiently equipped with skills to undertake my job	48 (48.0%)	37 (37.0%)	7 (7.0%)	6 (6.0%)	2 (2.0%)	4.23	.962
I have been offered learning and training opportunity	43 (43.0%)	33 (33.0%)	15 (15.0%)	5 (5.0%)	4 (4.0%)	4.06	1.071
I have attended specialized training to improve my job skills	42 (42.0%)	36 (36.0%)	7 (7.0%)	11 (11.0%)	4 (4.0%)	4.01	1.141
I have a good grasp of what the job entails	50 (50.0%)	35 (35.0%)	10 (10.0%)	3 (3.0%)	2 (2.0%)	4.28	.911
Overall mean						4.07	1.075

The staff attending training to enhance the skills at the corporation, 44(44.0%) of the respondents strongly agreeing, 41(41.0%) agreeing, 3(3.0%) being Undecided, 8(8.0%) disagreeing, and 4(4.0%) Strongly disagreeing.

when asked if the staff feel sufficiently equipped with skills to undertake the 48(48.0%) of the respondents strongly agreeing, 37(37.0%) agreeing, 7(7.0%) being Undecided, 6(6.0%) disagreeing and 2(2.0%) strongly disagreeing. When asked if learning and training opportunity had been offered, most respondents seemed to strongly agree with a higher percentage of 43(43.0%), 33(33.0%) agreeing and 4(4.0%) Strongly disagreeing. I have attended specialized training to improve my job skills at the corporation had

42(42.0%) of the respondents strongly agreeing, 36(36.0%) agreeing, 7(7.0%) being Undecided, 11(11.0%) disagreeing, and 4(4.0%) Strongly disagreeing. I have a good grasp of what the job entails had 50(50.0%) of the respondents strongly agreeing, 35(35.0%) agreeing, 10(10.0%) being Undecided, 3(3.0%) disagreeing and 2(2.0%) Strongly disagreeing.

Influence of asset management on service delivery in Kakamega county urban and sanitation corporation

The second objective of the study was to establish the Influence of asset management on service delivery in kakamega county urban water and sanitation corporation and the results were as shown in Table 2.

Table 2: Asset Management

Asset Management	Strongly Agree	Agreed	Undecided	Disagreed	Totally Disagreed	Mean	SD
Operation risks and hazards in operation and maintenance are identified and timely attended to	27 (27.0%)	49 (49.0%)	12 (12.0%)	8 (8.0%)	4 (4.0%)	3.87	1.031
An elaborate maintenance schedule is implemented in operation and maintenance	30 (30.0%)	51 (51.0%)	6 (6.0%)	13 (13.0%)		3.98	.943
Purchase of pipes, fittings and							

equipment is timely to enhance timely repair of leaks and bursts	33 (33.0%)	43 (43.0%)	10 (10.0%)	14 (14.0%)		3.95	.999
Equipment purchased are usually inspected to ensure they conform to the standards and user specifications before use	32 (32.0%)	49 (49.0%)	12 (12.0%)	6 (6.0%)	1 (1.0%)	4.05	.880
Operators are trained on the use of the plant maintenance and the use of machines	32 (32.0%)	41 (41.0%)	17 (17.0%)	9 (9.0%)	1 (1.0%)	3.94	.973
Overall mean						3.93	1.027

From the descriptive results in Table 2 on asset management, most respondents agreed 49(49.0%) that operation risks and hazards in operation and maintenance are identified and timely attended to 27(27.0%) Strongly agreeing, 12(12.0%) being Undecided with strongly disagreeing and disagreeing had 4.0% and 8.0% respectively. An elaborate maintenance schedule is implemented in operation and maintenance had 51(51.0%) of the respondents agreeing, 30(30.0%) agreeing, 6(6.0%) being Undecided and 13(13.0%) disagreeing. Purchase of pipes, fittings and equipment is timely to enhance timely repair of leaks and bursts had 43(43.0%) of the respondents agreeing, 33(33.0%) strongly agreeing, 10(14.0%) being Undecided and 14(14.0%). When

asked if there is if equipment purchased are usually inspected to ensure they conform to the standards and user specifications before use, most respondents seemed totally agree 49(49.0%), 32.0% agreeing, 12.0% undecided and 6.0% disagreed

Influence of financial utilization on effective service delivery in Kakamega county urban water and sanitation corporation

The third objective of the study was to examine the Influence of financial utilization on effective service delivery in Kakamega county urban water and sanitation corporation and the results were as shown in Table 3.

Table 3: Financial utilization

Financial utilization	Strongly Agreed	Agreed	Undecided	Disagreed	Totally Disagreed	Mean	SD
Revenue collected is sufficient	22 (22.0%)	41 (41.0%)	15 (15.0%)	20 (20.0%)	2 (2.0%)	3.61	1.100
Revenue allocated is used appropriately	22 (22.0%)	41 (41.0%)	21 (21.0%)	14 (14.0%)	2 (2.0%)	3.67	1.035
Budgeting is strictly adhered to in funds utilization	23 (23.0%)	40 (40.0%)	13 (13.0%)	21 (21.0%)	1 (1.0%)	3.99	1.089
Revenue collected meets the cost of operation	21 (21.0%)	35 (35.0%)	13 (13.0%)	23 (23.0%)	8 (8.0%)	3.38	1.270
Surplus revenue is ploughed back	15 (15.0%)	39 (39.0%)	19 (19.0%)	20 (20.0%)	7 (7.0%)	3.35	1.167
Overall mean						3.44	1.183

Revenue collected is sufficient, most of the respondents agreeing 41(41.0%), 22(22.0%) strongly agreeing, 15(15.0%) being Undecided, 20(20.0%) disagreeing, and 2(2.0%) Strongly disagreeing.

Revenue allocated is used appropriately, 41(41.0%) of the respondents agreed, 22(22.0%) strongly agreeing, 21(21.0%) being Undecided, 14(14.0%) disagreeing and 2(2.0%) strongly disagreeing. On responding to Budgeting is strictly adhered to in funds utilization, most respondents seemed to agree with a higher percentage of 40(40.0%) agreeing, 23(23.0%) strongly agreeing, 15(15.0%) being Undecided and 8(8.0%) disagreeing. Revenue collected meets the cost of operation had 35(35.0%) of the respondents agreeing, 21(21.0%) agreeing, 13(13.0%) being Undecided, 23(23.0%) disagreeing, and 8(8.0%)

Strongly disagreeing. Surplus revenue is ploughed back had 39(39.0%) of the respondents agreeing, 15(15.0%) disagreeing, 19(19.0%) being Undecided, 20(20.0%) disagreeing, and 7(7.0%) Strongly disagreeing.

Influence of information communication technology implementation on effective service delivery in Kakamega county urban water and sanitation corporation

Finally the last objective was to determine Influence of information communication technology implementation on effective service delivery in Kakamega county urban water and sanitation corporation. The respondents gave their views as shown in the table 4 below.

Table 4: Information communication technology implementation

Information communication technology	Strongly Agreed	Agreed	Undecided	Disagreed	Totally Disagreed	Mean	SD
Service delivery is supported by ICT infrastructure	42 (42.0%)	49 (49.0%)	6 (6.0%)	1 (1.0%)	2 (2.0%)	4.28	.792
I have been trained on the implementation of ICT	32 (32.0%)	42 (42.0%)	11 (11.0%)	11 (11.0%)	1 (1.0%)	3.87	1.107
I have relevant skills in ICT	33 (33.0%)	50 (50.0%)	7 (7.0%)	8 (8.0%)	1 (1.0%)	4.58	1.172
I embrace use of information technology	34 (34.0%)	51 (51.0%)	8 (8.0%)	7 (7.0%)		4.12	.832
ICT helps in quick information access	42 (42.0%)	41 (41.0%)	4 (4.0%)	4 (4.0%)	3 (3.0%)	4.27	.941
Overall mean						4.02	1.092

From the descriptive results in Table 4, the corporation services delivery was supported by ICT infrastructure had most of the respondents agreeing 49(49.0%), 42(42.0%) strongly agreeing, 6(6.0%) being Undecided, 1(1.0%) disagreeing and 2(2.0%) strongly disagreeing.

I have been trained on the implementation of ICT, 42(42.0%) of the respondents agreed, 32(32.0%) strongly agreeing, 11(11.0%) being Undecided, 11(11.0%) disagreeing and 1(1.0%) Strongly disagreeing. On responding to I have relevant skills in

ICT, most respondents agreed 40(40.0%), 33(33.0%) strongly agreeing, 7(7.0%) being Undecided and 8(8.0%) disagreeing as 1(1.0%) Strongly disagreeing. ICT helps in quick information access had 48(48.0%) of the respondents strongly agreeing, 41(41.0%) agreeing, 4(4.0%) being Undecided, 4(4.0%) disagreeing, and 3(3.0%) Strongly disagreeing.

Effective Service Delivery

The study sought to establish the views of the staffs on effective service delivery in Kakamega county

urban water and sanitation corporation. When asked to indicate the aspects of effective service delivery in

the corporation, the results were as shown in Table 5.

Table 5: Effective Service Delivery

Service delivery	Strongly Agreed	Agreed	Undecided	Disagreed	Totally Disagreed	Mean	SD
I respond to customers complaint requests and queries	57 (57.0%)	40 (40.0%)	2 (2.0%)	1 (1.0%)		4.52	.643
I notify the affected customers in event of an emergency on disruption from supply immediately	47 (47.0%)	41 (41.0%)	11 (11.0%)	1 (1.0%)		4.34	.714
I inform the customers with overdue bills before disconnection	43 (43.0%)	45 (45.0%)	9 (9.0%)	2 (2.0%)	1 (1.0%)	4.27	.790
Water reconnections are done within 24hours	37 (37.0%)	38 (38.0%)	8 (8.0%)	16 (16.0%)	1 (1.0%)	3.94	1.090
In event of doubt on meter reading accurracy the customer is adviced to pay for testing services	31 (31.0%)	47 (47.0%)	13 (13.0%)	1 (1.0%)	8 (8.0%)	3.92	1.098
Overall mean						4.01	1.078

I respond to customers complaint requests and queries had most of the respondents strongly agreeing 57(57.0%), 40(40.0%) agreeing, 2(2.0%) being Undecided, with 1(1.0%) disagreeing. I notify the affected customers in the event of emergency on disruption on from the supply immediately, 47(47.0%) of the respondents strongly agreed, 41(41.0%) agreeing, 11(11.0%) being Undecided, 1(1.0%) disagreeing. On responding to I inform the customers with overdue bills before disconnection, 37(37.0%) of respondents strongly agreed 38(38.0%)agreed, 8.0%

undecided, 16(16.0%) disagreeing as 1(1.0%) strongly disagreed. Water connections are done within 24 hours had 37(37.0%) of respondents strongly agreed 38(38.0%)agreed, 8.0% undecided, 16(16.0%) disagreeing as 1(1.0%) strongly disagreed. In the event of doubt on meter reading accuracy the customer is adviced to pay for testing services had 47(47.0%) of the respondents strongly agreeing, 31(31.0%) agreeing, 13(13.0%) being Undecided, 1(1.0%) disagreeing and 8(8.0%) Strongly disagreeing.

Inferential Analysis

Correlation

Table 6: Correlations between the independent and the dependent variables

Management competency	Asset management	Financial utilization	Information communication technology implementation	Effective service delivery
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Management competency	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	100				
Asset management	Pearson Correlation	.937**	1			
	Sig. (2-tailed)	.000				
	N	100	100			
Financial utilization	Pearson Correlation	.880**	.898**	1		
	Sig. (2-tailed)	.000	.000			
	N	100	100	100		
Information communication technology implementation	Pearson Correlation	.980**	.956**	.892**	1	
	Sig. (2-tailed)	.000	.000	.000		
	N	100	100	100	100	
Effective service delivery	Pearson Correlation	.975**	.958**	.884**	.987**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	100	100	100	100	100

** . Correlation is significant at the 0.01 level (2-tailed).

All the four variables of management competency, asset management, financial utilization and Information Communication Technology Implementation were shown to positively influence on effective service delivery at Kakamega County urban water and sanitation Corporation.

Multi regression

From the results, the model showed a goodness of fit as indicated by the high Pearson's correlation coefficient of the model, $R = 0.989$. Further, the adjusted R^2 value of 0.979 implied that the variations

in independent variables; management competency, asset management, financial utilization and Information Communication Technology Implementation jointly explain ninety seven point nine (97.9%) of the variations in effective service delivery at Kakamega County urban water and sanitation Corporation. Thus, there are other factors that account for the remaining 2.1% in the variation in effective service delivery at Kakamega County urban water and sanitation Corporation that were not covered in the study.

Table 7: Multiple Regression Summary

Model Summary					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	
1	.989 ^a	.979	.978	.159	

a. Predictors: (Constant), Information communication technology implementation, Financial utilization, Asset management, Management competency

ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	112.580	4	28.145	1109.679	.000 ^b
	Residual	2.410	95	.025		

Total 114.990 99

- a. Dependent Variable: Effective service delivery
 b. Predictors: (Constant), Information communication technology implementation, Financial utilization, Asset management, Management competency

Model	Coefficients ^a				t	Sig.
	Unstandardized Coefficients	Standardized Coefficients				
	B	Std. Error	Beta			
1 (Constant)	.024	0.024		.353	.042	
Management competency	.209	.074	.209	2.811	.006	
Asset management	.197	.056	.188	3.495	.001	
Financial utilization	.032	.032	.035	.999	.032	
Information communication technology implementation	.626	.088	.634	7.158	.000	

a. Dependent Variable: Effective service delivery

From the values of unstandardized regression coefficients above, all independent variables; management competency, asset management, financial utilization and Information Communication Technology Implementation significantly influences effective service delivery thus confirming the fitness of the conceptualized multiple regression model;

$$Y_{ESD} = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon$$

Where

X_1 = Management Competency

X_2 = Asset management

X_3 = Financial utilization

X_4 = Level of information communication Technology

YESD = Effective Service Delivery

α = The constant

$\beta_1, \beta_2, \beta_3, \beta_4$ = Regression constants

ϵ = Error term

Therefore the revised final multiple regression model is;

$$Y_{ESD} = 0.024 + 0.209X_1 + 0.188X_2 + 0.039X_3 + 0.634X_4 + \epsilon$$

Therefore, supposing all independent variables were (0.000), service delivery at Kakamega county urban water and sanitation corporation would be 0.068. A single increase in management competency would

significantly lead to 20.9% increase in service delivery. A single increase in asset management would lead to 18.8% increase in service delivery. A single increase in financial utilization would lead to 39.0% increase in service delivery while a single increase in information technology implementation would lead to 63.4% increase in service delivery.

Testing of Null Hypotheses

H₀₁: Management competency has no influence on service delivery in kakamega county urban water and sanitation corporation.

H_A: Management competency has significant influence on service delivery in kakamega county urban water and sanitation corporation.

T-test statistics results: (t = 2.811; p=0.006 < 0.05)

Verdict: The null hypothesis **H₀₁** was rejected.

H₀₂: Asset management has no influence on service delivery in kakamega county urban water and sanitation corporation.

H_A: Asset management has significant influence on service delivery in kakamega county urban water and sanitation corporation

T-test statistics results: (t = 3.495; p=0.001 < 0.05)

Verdict: The null hypothesis H_{02} was rejected.

H₀₃: Financial utilization has no influence on service delivery in kakamega county urban water and sanitation corporation.

H_A: Financial utilization has significant influence on service delivery in kakamega county urban water and sanitation corporation.

T-test statistics results: ($t = .999; p=0.032 < 0.05$)

Verdict: The null hypothesis H_{03} was rejected.

H₀₄: Implementation of Information technology implementation has no influence on service delivery in kakamega county urban water and sanitation corporation.

H_A: Implementation of Information technology implementation has significant influence on service delivery in kakamega county urban water and sanitation corporation.

T-test statistics results: ($t = 7.158; p=0.000 < 0.05$)

Verdict: The null hypothesis H_{04} was rejected.

CONCLUSIONS AND RECOMMENDATIONS

From the research findings, the study concluded that all independent variables (management competency, asset management, financial utilization and ICT implementation) have positive relationship and perfectly correlate to the dependent variable (effective service delivery). Several researches have been done on factors affecting effective service delivery and there it can be concluded that institutional factors has a great influence on service delivery by employees and thus can be supported by training as an advancement of the attitude and skills required by an individual to perform a given task (Oliseh, 2005).

The study recommended that the corporation should sufficiently offer relevant training management competency. The trainings at the corporation improve skills and enhance good grasp of what the job entails resulting to high performance.

Secondly the study recommended training programs plant machine uses and maintenance as this would enhance the knowledge on the thorough inspections of the purchased pipes, fittings and equipments that enhances timely repair of leaks and bursts which when not quickly addressed would lead to wastage thus a low return of the revenue collected.

To add on, the corporation to enhance its strict adherence to to the budget in fund utilization as this would enhance appropriate revenue allocation and collection to meet the operational cost of the urban water and sanitation corporation.

Lastly, the corporation should advance their training techniques with respect to the changing technology as service delivery should be highly supported by ICT infrastructures and make the interaction between the company and the clients be fast, convenient and reliable.

Suggestions for Further Research

A study can be done on the influence of improved technology on effective service delivery in KACUWASCO. A further research can also be done appropriateness of the current training methods on asset management and management competency on effective service delivery of KACUWASCO. Another research can as well be how frequent the KACUWASCO identifies relevant training areas and the effects of the trainings on service delivery. Lastly similar researches can be done in other county urban water and sanitation corporations.

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