Journal of Public Policy & Governance

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James Ambuso Omondi, Dr. Wamalwa Dennis Nyongesa & Dr. Karuri Thiongo

ISSN: 2616-8413

Stratford Peer Reviewed Journals and Book Publishing
Journal of Public Policy & Governance
Volume 5||Issue 3||Page 60-80 ||September||2021|
Email: info@stratfordjournals.org ISSN: 2616-8413

Analysis of the Effect of Water Sector Reforms on Governance in Athi Water Services Board, Kenya

[1*]James Ambuso Omondi, [2]Dr. Wamalwa Dennis Nyongesa & [3]Dr. Karuri Thiongo

[1*]Postgraduate student, Mount Kenya University

[2]Lecturer, Mount Kenya University

[3]Lecturer, Mount Kenya University

***Email of the Corresponding Author:** omondiambuso@yahoo.com

***How to cite this article*: Omondi, J. A., Nyongesa, W., D., & Thiongo, K. (2021). Analysis of the Effect of Water Sector Reforms on Governance in Athi Water Services Board, Kenya. *Journal of Public Policy & Governance*, Vol. 5(3), 60-80.** https://doi.org/10.53819/81018102t5012

Abstract

The study analyzed the effect of water sector reforms on governance at athi water services board. The specific objectives of the study were to examine the impact on coverage, reporting, stakeholder and the challenges encountered in the implementation of water sector reforms on governance at Athi Water Services Board. The study examined the moderating effect of government legislation and donors. The study was guided by two theories: stakeholder theory and dynamic capabilities theory. The study used mixed methodology that involved collecting data by combining both quantitative and qualitative approaches. The study adopted a descriptive research design. The target population was 80 employees working from the top management level, middle level management and functional level of management. The researcher conducted a census. Questionnaires were used to collect the data in which contained both open-ended questions and close-ended questions. Content and the construct validity was obtained with the help of the supervisor, who rechecked the research instruments to justify that the material inside the questionnaire was sufficient for the research. Likewise, to test for the reliability of the instruments, ten employees from Rift Valley Water Services Board were used and the internal consistency was tested using Cronbach's alpha (α) in which the recommended value of 0.7 was utilized as a cut-off of reliabilities. Qualitative data was analyzed using content analysis while quantitative using descriptive and inferential statistics.The study found that coverage is positively and significantly related to governance (β=.337, p=0.000). Moreover, a positive and significant relationship was found to exist between reporting and governance (β=.241, p=0.004). Further, stakeholder participation was found to have a positive and significant relationship on governance (β=.182, p=0.039). The regression results indicated challenges is negatively and significantly related to governance (β=.-135, p=0.046). In addition, government legislation and donors was found to be a good moderator. The R square increased significantly from 0.677 (67.7%) to 0.846 (84.6%) when coverage, reporting, stakeholder participation and challenges were interacted with government legislation. The study concluded that coverage, reporting, stakeholder participation, challenges

were significant in predicting governance. The study recommended there should be adequate connection to the informal sectors with sufficient water supply, developing of more sources of water and enhancing the high frequency of water supply in urban areas. There is a need for the preparation and maintenance of a strategic plan. The study also recommended that the finance department be independent and not influenced by management. Also, there is a need for enabling stakeholders to inspect the books of accounts freely. There should be more involvement of stakeholders to understand the root of the water sector challenges. Sufficient funds should be directed to the water sector to facilitate engagement in projects. There should be the facilitation of better services for Kenyans. There should be an investment in infrastructure necessary for production of clean water. There should be the creation of enhanced legislation that will improve governance in the water sector in Kenya.

Keywords: *Coverage, reporting, stakeholder participation, governance, challenges on governance, government legislation, water sector reforms, Athi Water Services Board, Kenya*

1.1 Introduction

Water is an indispensable element for sustainable development and across social, economic and environmental dimensions and is very central for human survival and supports good health (Dell'Angelo, McCord, Gower, Carpenter, Caylor & Evans, 2016). The presence of water enables people to live a quality life and supports the sustainability of food to both humans and animals. McCord, Dell'Angelo, Baldwin, and Evans (2017) reported that water is everything for the human and there will be no life on earth without water shortages leads to increased toll on health issues which affects the life of people. Some of the slums in the urban areas have been contributed to the scarcity of water in which they cannot afford the purchase of clean water from the merchants who supply water intending to make profits (Okechi, 2015). Kenya has abundant body water masses, but the availability of water in some regions is still a challenge. Despite the water sector changes that were developed, most of those reforms have not been realized (Asante, 2010). The water boards in the country have been reported with financial instabilities, poor management, embezzlement of the funds that have led the reforms not to be realized. Further, the poor infrastructure has led has led to no sound base for growing the information that supports incorporated administration of multi-sectoral utilization of the water, preparing of faculty and institutional improvement (Adams, Sambu & Smiley, 2019).

A working paper by Poddar, Qureshi and Shi (2014) on the reforms of the different institutions in the process of water resources management in Asia and Australia established that various factors such as political, economic and social affect the implementation of the water reforms. Also, according to Bandaragoda (2016), lack of proper consultation among all of the stakeholders concerned with the distribution of water to the public causes challenges which fuels conflicts and management bureaucracy in water reforms. In Indonesia, Fulazzaky (2014) noted that the government and the public develop a consensus which brings out successful implementation of the water reforms thus making clean water to be available to everyone thus improves the economic sustainability. Emenike, Tenebe, Omole, Ngene, Oniemayin, Maxwell, and Onoka (2017) reported that water sector reforms in Nigeria had caused sustainability and most of the citizen in the Southwest can be in a position to access to clean and reliable water. Additionally, the successful implementation of the water reforms primarily depends on the level of accountability, integrity and resources available to the different sectors who are given the responsibility to supply water in Ghana (Acheampong, Swilling & Urama, 2016). In Tanzania, Haakon Lein and Mattias

https://doi.org/10.53819/81018102t5012

Tagseth,(2009) found that execution of the water reforms in the country is state-centered, community-based and the bureaucracy is involved in what it is termed as proper management to resolve conflicts between communities over the central Pangani river basin.

In Kenya, Schwartz, Tutusaus and Savelli (2017) showed that In 2001, all stakeholders in the water sector agreed on a need for new water policy. The new strategy resulted in distributions of roles for key players. The purpose of national government changed to include providing policy direction, regulatory and other enabling functions (Matondo, 2002). Also, it showed that the water sector reforms brought up some changes in the manner in which the Kenyan water is distributed. Moreover, Ifejika Speranza, Kiteme, Wiesmann and Jörin (2018) revealed that the water reforms sectors in the country had been contributed by lack of not involving all the stakeholders, the political interference and poor infrastructure. The water Act 2002 established an independent authority, the Water Resources Management Authority (WRMA), Water Services Regulatory Board (WASREB), Eight Water Services Boards (WSB), various regional catchments offices, catchments area advisory committees (CAACs) and the establishment of water users association (WRUAs) (Okechi, 2015). These established boards were given the responsibility to ensure that the public has access to pure and clean water. The Athi Water Services Board recognizes the importance of providing its customers with appropriate services and making sure the water providers do not exploit the public. Also, the board is responsible for reporting to the government on the challenges, administration and achievement in ensuring water safety in the entire nation (Bellaubi & Visscher, 2014). The customer satisfaction is essential and the board established customer service department in 2007 to cater for any enquiries concerning the institution and the provision of water and further the implementation of the water reforms that were ratified earlier on (Okechi, 2015).

1.2 Statement of The Problem

Kenya is a nation supplied with enormous water resources in most of the parts of the country. Its water from the lakes, waterways, springs and underground can serve the entire nation with clean and sufficient water. However, the majority of the population are still not accessing clean water and only 53% of the people residing in the urban areas are connected with clean water (Dill & Crow 2014). Despite the water reforms that were established to ensure the provision of clean and reliable water to the growing population in a coordinated manner, there is still water rationing in significant cities including Nairobi and thus the reforms have not produced any meaningful impact (Okechi, 2015). According to Schwartz, Tutusaus and Savelli (2017) the reforms have not been realistic because of the dilapidated infrastructure, inadequate management and maintenance of existing infrastructure, insufficient funds and high levels of the debts by public institutions. According to Mekonnen, Hoekstra and Becht (2012), the water boards institutions responsible for the provision of water in the country are so ineffective due to rampant corruption in awarding of consultancy services, project designs and construction of water catchments facilities like dams and general infrastructures to boost water service delivery. Further, McCord, Dell'Angelo, Baldwin and Evans (2017) reported there are problems of accessibility and availability of clean water in cities and this has been attributed poor management and bad policies, mismanagement, inequitable distribution, corruption and other bureaucratic inefficiencies in the management of the water boards. However, the analysis of the effect of water sector reforms on governance in Athi water services board remains uninvestigated. From the above studies, none of them used coverage, reporting, stakeholder participation and challenges encountered in the implementation of water

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sector reforms on governance at Athi Water Services Board. The current research will bridge these gaps and attempt to answer the question; what is the effect of water sector reforms on governance in the Athi Water Services Board.

1.3 Research Objectives

i. To examine the impact of coverage on governance after the water sector reforms in Athi Water Services Board.
ii. To eastablish the effect of reporting on governance after the water sector reforms in Athi Water Services Board.
iii. To establish the effect of stakeholder participation on governance after water sector reforms in Athi Water Services Board.
iv. To examine the challenges on governance after water sector reforms in Athi Water Services Board.
v. To explore the moderating effect of government legislation on the relationship between the water sector reforms and governance in athi water services board.

2.0 Literature Review

2.1 Theoretical Literature

The study was based on stakeholder theory and dynamic capabilities theory. Dr R. Edward Freeman amplified stakeholder Theory in 1983. The theory explicates that the firm arranges and deals with the group of players of helpful and aggressive interests of various stakeholders or supporters (Freeman, 1983). The theory shows that the firms have different objectives to achieve their mission in opposition to the recommendation of the traditional economic theory (Friedman, 1970). As stakeholder theory progressively ended up famous, it likewise shifted in different understandings and contentions for its legitimization (Donalson & Preston, 1995). In any case, stakeholder theory has been undermined for expecting that the interests of the various partners can be the ideal situation, traded off or adjusted against one another (Phillips, Freeman & Wicks, 2003). Moreover, the theory emphasizes the responsibility of the individual entities to manage the firms in such a way that balances the interests of all these stakeholder groups (Freeman, 1983). The partners are occupied with the development of the moral character of firms and its content shows up as the proper system since the theory extends its underlying foundations in the idea of Corporate Social Responsibility (Okechi, 2015). The theory was also helpful in this study since it established the role of the management in the water sector reforms on governance in the Athi Water Services Board.

This dynamic capabilities theory was put forward by David Teece, Gary Pisano and Amy Shuen (Teece, 2018). Productive capacity is viewed as the ability of a firm to adjust its asset base intentionally. They characterized the idea of Dynamic size as the association's capacity to join, structure, and redesign inside and outside abilities to address quickly propelling conditions. The theory exhibits how firms facilitate, structure, and reconfigure their inner and outsidel firm-express abilities into new boundaries that match their intense condition. The theory expects that organizations with progressively remarkable powerful abilities (investment funds technique) will knock out firms that have littler dynamic abilities. The theory means to see how firms utilize dynamic capacities to make and continue procedures usage over different firms by reacting to and making environmental changes. Theory of dynamic capabilities is relevant to many of the organizations and could help the organization to distinguish developing opportunities, restore its

https://doi.org/10.53819/81018102t5012

Stratford Peer Reviewed Journals and Book Publishing
Journal of Public Policy & Governance
Volume 5||Issue 3||Page 60-80 ||September||2021|
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capabilities and keep it's focused on favourable circumstances in a dynamic business condition. Further, the advancement of centre dynamic capacities that are important for the organization change in various periods of the improvements proposed in the innovative part and plan of action. Therefore, the theory was significant to the present examination and the basis of the theory helped to establish on how the organizations can re-establish itself and improve its efficiency thus make the water sector reforms on governance in Athi Water Services Board to be realistic.

2.2 Conceptual Framework

According to Young (2009), conceptual framework, is a diagrammatical portrayal that demonstrates the connection between variables. Figure 1 presents the conceptual framework.

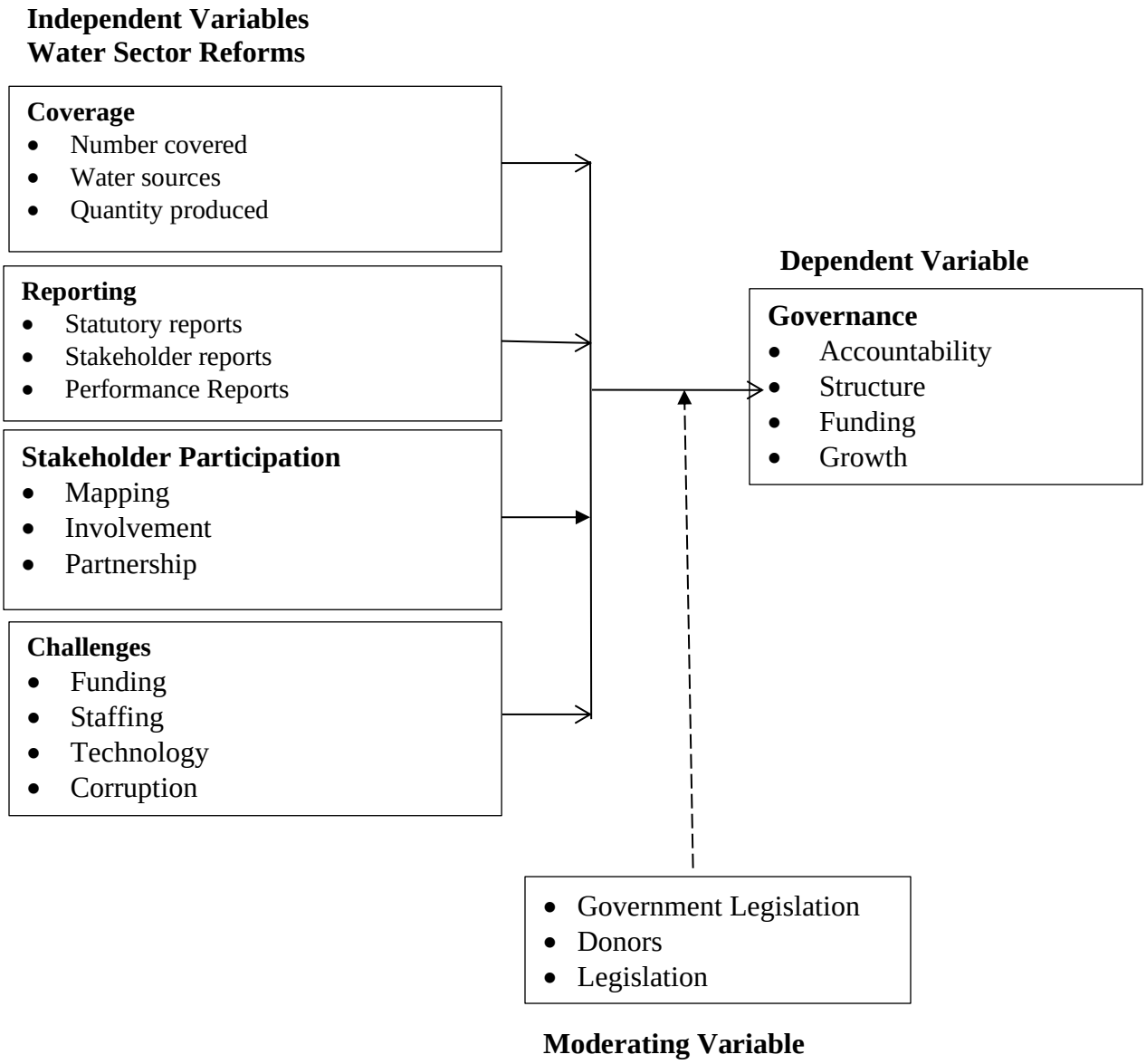

Figure 1: Conceptual Framework

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2.3 Empirical Literature

In 1974, the government rolled out the master plan for the provision of water to the people of Kenya. The program aimed at ensuring that each person will be in a position to access water in a distance of only 4 kilometers by 2000 (Mekonnen, Hoekstra & Becht, 2012). The targets were to be achieved through establishing many sources of water such as developing boreholes, storage dams and rebuilding the infrastructure for easy transportation of the water from one point to another. Moreover, the supply of the water will rely on the public sector in which will do most of the distribution of water to different sectors (Schwartz, Tutusaus & Savelli, 2017). However, this was not achievable since the institutions assigned with the duties were so inefficient with rampant corruption and poor governance structure. The water supplies were in great need of rehabilitation and restructuring to bring in more competent employees and thus, adequate water availability remains a problem to many consumers (Okechi, 2015).

Bandaragoda (2016) iexplored the status of institutional changes for incorporated water assets to the board management in Asia. The discoveries of the investigation showed that genuine utilization after the development of the establishments had been postponed because of numerous social, financial and political difficulties. The examination, through an assistant's obligation, suggested that there was a need for a zenith body to mastermind water permitting among the particular water client capacities. There was in like way a recommendation that there was a need for a reasonable water approach and related approval so to improve the collection of water to a progressively critical masses in India.A study was done Cherop (2012) to analyze the components impacting the execution of changes in the water boards in Mombasa County. The examination uncovered that the physical framework had worsened the procedure of implementation of reforms, weak foundation, deferred and intensifies the effective regulation of water section changes.

Reporting has evolved to become a ubiquitous concept, attracting all sorts of labels which indicates its problems as well as its significance, both normative and descriptive (Bovens, 2010). Further, reporting has been defined as the most crucial aspect of the transformation and doing of the activities in which all the stakeholders are made aware of the performance of the institutions (Katomero, 2017). Accountability or reporting changes the ways the public perceives the company and its increases the transparency withing the different institutions (Schliemann & Bovens, 2010). However, the reporting of many government institutions, mostly in developing nations, Heinrich Boll Foundation (2004) reported that it is also essential to link reform policies to their respective networks of partners and members. Heinrich Boll Foundation (2004) also revealed that water is a resource that is very vital for the survival of the human being and animals and should to be given the highest priority and involve all the stakeholders to make effective and reliable. Thus, Mengistu (2015) showed initiatives has to reach out to a broader audience of representatives from the energy sector, parliamentarians, elected officials, media, buyer affiliations, worker's guilds and private division (sustenance organizations, recreational organizations) and civil society as well. Administrative systems and embraced execution pointers (administration conveyance) are part of the measures to screen and assess water conservations, and Kenya to set up limit building forms at a national and community level to cultivate excellent administration of the water.Araral and Wu (2016) compared the management of the water resources from two Asian countries of China and India. The discoveries of the investigation revealed that the administration of the water asset in China is good compared to India and many of the residents in China approach clean water in a large portion of the urban areas dissimilar to in India. The study established that in China,

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corruption and other forms of embezzlement of money are highly discouraged and the consequences of any of the individual found acting against the law is highly punished.

3.1 Research Methodolgy

This research study utilized a mixed methodology. This involveed conducting research by combining both quantitative and qualitative approaches in data collection, analyzing and interpretation of data. The researcher prefered this method as both quantitative and qualitative methods was complement each other especially while collecting and analyzing quantitative (close-ended) data and qualitative (open-ended) data. This examination used descriptive research design which portrays the properties of a specific circumstance, occasion or case. The target population was 80 employees in the management leves. The study conducted a census to collect data from the targeted population in athi water services board. A census entails using all the targeted population for conducting the survey. Questionnaires were research instrumensts adopted.

4.0 Research Findings And Discussion

4.1 Descriptive Statistics

The section presents the descriptive statistics of coverage, reporting, stakeholder participation, challenges, government legislation, donors and governance.

4.1.1 Descriptive Statistics of Coverage

The descriptive statistics of coverage is presented in Table 1

Table 1: Descriptive Statistics of Coverage

Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	SD
Water coverage has been increasing over time since the inception of the reforms	5.40%	12.20%	13.50%	37.80%	31.10%	3.77	1.18
The informal sectors in the country has been connected with sufficient water supply	6.80%	13.80%	24.00%	36.50%	18.90%	3.50	1.13
There is more sources of water in the country After the reforms	5.40%	6.80%	36.50%	40.50%	10.80%	3.95	0.97
There is high frequency of water supply in urban areas after the reforms	4.10%	13.50%	24.30%	35.10%	23.00%	3.59	1.31
The water coverage is highly influenced by the natural calamities	1.40%	17.60%	12.20%	32.40%	36.50%	3.85	1.14
More formal water structures have been developed after the reforms to increase in coverage	2.70%	16.20%	10.80%	41.90%	28.40%	3.67	1.12
Average						**3.72**	**1.14**

Based on the descriptive statistics presented in Table 1, 68.90% (37.80%+31.10%) of the managers agreed water coverage has been increasing over time since the inception of the reforms while 17.60% (5.40%+ 12.20%) disagreed with the survey question. Those who remained neutral were

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13.50%. The mean score of the survey question was 3.77, with a standard deviation of 1.18. This implied that most of the managers agreed that water coverage has been increasing over time since the inception of the reforms. Further, 55.40% of the managers agreed the informal sectors in the country had been connected with sufficient water supply, while 20.60% disagreed with the statement. Those who remained neutral were 24.00%. The mean score of the survey question was 3.50, with a standard deviation of 1.13. This indicated that most managers agreed the informal sectors in the country had been connected with sufficient water supply. Simialrly, 51.30% of the managers agreed there is more sources of water in the country after the reforms, 12.20% disagreed and 36.50% were neutral. The mean score of the statement was 3.95, with a standard deviation of 0.97. Further, 58.10% of the managers agreed there is a high frequency of water supply in urban areas after the reforms, 17.60% disagreed and 24.30% remained neutral. The mean score of the survey question was 3.59, with a standard deviation of 1.31. This implied that most of the managers agreed there is a high frequency of water supply in urban areas after the reforms. In addition, 68.90% of the managers agreed the water coverage is highly influenced by the natural calamities, 19% disagreed and 12.20% remained neutral.

The mean score was 3.85, with a standard deviation of 1.14. This implied that most of the managers agreed the water coverage is highly influenced by the natural calamities. Lastly, 70.30% of the managers agreed more formal water structures had been developed after the reforms to increase in coverage, 18.90% disagreed and 10.80% remained neutral. The mean score of ther survey question was 3.67 with a standard deviation of 1.12. This meant that most of the managers agreed more formal water structures had been developed after the reforms to increase coverage. The average mean score of the survey questions relating to coverage was 3.72, with a standard deviation of 1.14. This indicated majority of the managers agreed coverage of water had been positively affected by the reforms. Further, the functional manager reported, "*the extent of water coverage in the country after the water sector reforms has been high*" [Functional manager]. Besides, a manager from the senior level management noted, "*the extent of water coverage in the country after the water sector reforms has improved by more than 18%",* [senior manager]

4.1.2 Descriptive Statistics of Reporting

The descriptive statistics of reporting is illustrated in Table 2

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Table 2: Descriptive Statistics of Reporting

Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	SD
Annual Financial statements are prepared without discrepancies	6.80%	20.30%	9.50%	37.80%	25.70%	3.55	1.26
Annual Financial statements are audited on an annual basis	5.40%	13.50%	13.50%	27.00%	40.50%	3.84	1.25
Financial statements are submitted to Parliament and other stakeholders for scrutiny	8.10%	8.10%	17.30%	39.50%	27.00%	3.66	1.20
The internal auditors cooperate with the external auditors.	9.50%	10.80%	9.20%	48.90%	21.60%	3.59	1.22
There is preparation and maintenance of a strategic plan	1.40%	11.50%	15.60%	33.80%	37.80%	3.97	1.03
The financial department is independent and is not influenced by management.	12.20%	14.90%	16.20%	36.50%	20.30%	3.78	1.30
Average						**3.73**	**1.21**

As per the descriptive results depicted in Table 2, 63.50% (37.80%+25.70%) of the managers agreed annual financial statements are prepared without discrepancies, 27.10% (6.80%+20.30%) disagreed and 9.50% remained neutral. The mean score of the survey question was 3.55, with a standard deviation of 1.26. This implied that most of the managers agreed annual financial statements are prepared without discrepancies. Further, 67.50% agreed annual financial statements are audited annually, 18.90% disagreed and 13.50% remained neutral. The mean score of the survey question was 3.84, with a standard deviation of 1.25. This indicated most of the managers agreed annual financial statements are audited yearly. Further, 66.50% of the managers agreed financial statements are submitted to parliament and other stakeholders for scrutiny, 16.20% disagreed and 17.30% remained neutral. In addition, 70.50% of the managers agreed the internal auditors cooperate with the external auditors, 20.30% disagreed and 9.20% were neutral. The mean score of the survey question was 3.59, with a standard deviation of 1.22. This implied most of the managers agreed the internal auditors cooperate with the external auditors. Moreover, 71.60% of the managers agreed there is preparation and maintenance of a strategic plan, 12.90% disagreed and 15.60% remained neutral.

The mean score of the survey question was 3.97, with a standard deviation of 1.03. This implied most managers agreed there are preparation and maintenance of a strategic plan. Finally, 56.80% of the managers agreed financial department is independent and is not influenced by management, 27.10% disagreed and 16.20% remained neutral. The mean score of the survey question was 3.78, with a standard deviation of 1.30. The average mean score of the survey question of reporting was 3.73, with a standard deviation of 1.21. This indicated that most of the managers agreed reporting is essential in governance at Athi Water Services Board. Most of the managers agreed with most of the survey questions of reporting developed by the researcher. Moreover, a top management manager argued, "*reporting on governance after the water sector reforms in Athi Water Service*

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Board has increased its efficiency" [Top manager, 2020]. Further, a manager from the functional management level indicated, "*Reporting provides important detail that helps develop future forecasts, guide budget planning and improve decision-making*" [Functional manager, 2020]. In addition, a manager from the senior management level revealed, "*Managers use reports to track progress and growth, identify trends or any irregularities that may need further investigation*" [Senior manager, 2020].

4.1.3 Descritive Statistics of Stakeholder Participation

The descriptive statistics of stakeholder participation is presented in Table 3

Table 3: Descriptive Statistics of Stakeholder Participation

Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	SD
All the stakehoders are invoved in the decision making	14.90%	5.40%	18.90%	33.80%	27.00%	3.53	1.35
Stakeholders are involved in the implementation process	6.80%	14.90%	13.50%	41.90%	23.00%	3.59	1.19
stakeholder are consulted before making any changes in the board	12.20%	11.90%	22.40%	31.90%	21.60%	3.78	1.29
The policies passed for water reforms are consistent and easy to implement smoothly	8.10%	5.40%	28.40%	28.40%	29.70%	3.66	1.20
Stakeholders are free to audit the books of accoutnt	2.70%	13.50%	27.00%	39.20%	17.60%	3.55	1.02
Stakeholders choose their representatives to present their interest in the board	5.40%	12.20%	29.00%	25.00%	28.40%	3.61	1.18
Average						**3.62**	**1.20**

Based on the results presented in Table 3, 60.80% (33.80%+27.00%) of the managers agreed all the stakeholders are involved in the decision making, 20.30% (14.90%+5.40%) disagreed and 18.90% remained neutral. The mean score of the survey question was 3.53, with a standard deviation of 1.35. This implied most of the managers agreed all the stakeholders are involved in the decision making. Moreover, 64.90% of the managers agreed stakeholders are involved in the implementation process, 21.70% disagreed and 13.50% remained neutral. The mean score of the survey question was 3.59, with a standard deviation of 1.19. Moreover, 53.50% of the managers agreed stakeholders are consulted before making any changes in the board, 24.10% disagreed and 22.40% remained neutral. The mean score of the survey question was 3.78, with a standard deviation of 1.29. This indicated that stakeholders are consulted before making any changes to the board.

Furthermore, 58.10% of the managers agreed policies passed for water reforms are consistent and easy to implement smoothly, 13.50% disagreed and 28.40% remained neutral. The mean score of the survey question was 3.66, with a standard deviation of 1.20. This implied policies passed for water reforms are consistent and easy to implement smoothly. Further, 56.80% of the managers agreed stakeholders are free to audit the books of account, 16.20% disagreed and 27.00% remained neutral. The mean score of the survey was 3.55, with a standard deviation of 1.02. This showed

https://doi.org/10.53819/81018102t5012

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that stakeholders are free to audit the books of account. Besides, 53.40% of the managers agreed stakeholders choose their representatives to present their interest in the board, 17.60% and 29% remained neutral. This meant that stakeholders choose their representatives to present their interests on the board. The average mean score of the survey questions of stakeholder participation was 3.62, with a standard deviation of 1.20. This indicated most of the managers agreed there is stakeholder participation within the Athi Water Servive Board. Moreover, a top management manager indicated, "*stakeholder participation has improved the governance after water sector reforms in Athi Water Services Board*" [Top manager, 2020]. In addition, a manager from the functional management level reported, "Stakeholders are involved in the implementation process *after water sector reforms in Athi Water Services Board"* [Functional manager, 2020].

4.1.4 Descriptive Statistics of Challenges

The descriptive statistics of challenges is presented in Table 4

Table 4: Descriptive Statistics of Challenges

Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	SD
There is shortages of funding to the board to facilitate the implementation of reforms	5.40%	10.80%	25.70%	32.40%	25.70%	3.62	1.14
Corruption has influenced the implementation of the reforms	6.80%	12.20%	25.70%	28.40%	27.00%	3.57	1.21
The implementation of the reforms has been influenced by high levels of the debts by public institutions	2.70%	8.10%	20.30%	54.10%	14.90%	3.70	0.92
Poor infrastructure has weakened the realization of the reform	8.10%	10.80%	20.30%	41.90%	18.90%	3.53	1.16
There is bureaucratic inefficiencies in the management of the water board	4.10%	7.50%	10.80%	62.20%	15.50%	3.59	0.98
There is a tremendous political influence within the board	9.50%	6.80%	13.50%	29.70%	40.50%	3.85	1.29
Average						**3.64**	**1.12**

Based on the results presented in Table 4, 58.10% (32.40%+25.70%) of the managers agreed there is shortages of funding to the board to facilitate the implementation of reforms, 16.20% disagreed and 25.70% were neutral. The mean score of the survey question was 3.62, with a standard deviation of 1.14. This implied there is a shortage of funding to the board to facilitate the implementation of reforms. Further, 55.40% of the managers agreed corruption had influenced the implementation of the reforms, 19% disagreed and 25.70% remained neutral. The mean score of the survey question was 3.57, with a standard deviation of 1.21. This indicated that corruption had influenced the implementation of the reforms. Besides, 69% of the managers agreed the implementation of the reforms had been influenced by high levels of the debts by public institutions, 10.80% disagreed and 20.30% remained neutral. The mean score of the survey

https://doi.org/10.53819/81018102t5012

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question was 3.70, with a standard deviation of 0.92. This implied that the reforms' implementation had been influenced by high levels of debts by public institutions. Moreover, 60.80% of the managers agreed poor infrastructure had weakened the realization of the reform, 18.90% disagreed and 20.30% remained neutral. The mean score of the survey question was 3.53, with a standard deviation of 1.16. This meant that poor infrastructure had weakened the realization of the reforms. In addition, 77.70% of the managers agreed there is bureaucratic inefficiencies in the management of the water board, 11.60 disagreed and 10.80% remained neutral. The mean score of the survey question was 3.59 with a standard deviation of 0.98.

Furthermore, 70.20% of the managers agreed there is a tremendous political influence within the board, 16.30% disagreed and 13.50% remained neutral. The mean score of the survey question was 3.85 with a standard deviation of 1.29. This implied there is a tremendous political influence within the board. The average mean score of the survey questions of challenges was 3.64 with a standard deviation of 1.12. These results imply that challenges are vital factors that influence water sector reforms in the athi water services board. Further, a functional manager revealed, "*some of the challenges that influence governance at Athi Water Services Board include lack of communication and commitment, poor coordination and sharing of responsibilities and inadequate*" [Functional manager, 2020]. Moreover, the top manager noted, "*lack of commitment, self-interest and corruption are key setbacks that influence the governance at Athi Water Services Board"* [Top manager, 2020].

4.1.5 Decscriptive Statistics of Government Legislation, Donors

The decscriptive statistics of government legislation, donors is illustrated in Table 5.

Table 5: Decscriptive Statistics of Government Legislation, Donors

Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	SD
The Government develops policy documents for use by the board	2.70%	6.80%	14.90%	52.70%	23.00%	3.86	0.94
Athi Water Services Board is required make periodic reports to the government	5.40%	9.50%	13.50%	24.30%	47.30%	3.99	1.22
Athi Water Services Board partners with donors in the implementation of its activities	3.80%	8.10%	12.20%	25.70%	50.30%	4.02	1.14
Athi Water Services Board submits periodic reports to donors for specific funded projects	4.10%	13.50%	16.20%	17.60%	48.60%	3.93	1.25
The laws that govern the water sector in Kenya are reviewed from time to time	9.50%	10.80%	16.20%	36.50%	27.00%	3.61	1.26
Athi Water Services Board is regulated by various government agancies	1.40%	2.70%	18.90%	43.20%	33.80%	4.05	0.87
Average						**3.91**	**1.12**

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Based on the descriptive statistics presented in Table 5, 75.70% (52.70% +23.00%) of the managers agreed the government develops policy documents for use by the board, 9.50% (2.70%+6.80%) disagreed and 14.90% remained neutral. The mean score of the survey question was 3.86, with a standard deviation of 0.94. This implied government develops policy documents for use by the board. Moreover, 71.60% of the managers agreed Athi Water Services Board is required to make periodic reports to the government, 14.90% disagreed and 13.50% remained neutral. The mean score of the survey question was 3.99, with a standard deviation of 1.22. Further, 76% of the managers agreed Athi Water Services Board partners with donors in the implementation of its activities, 11.90% disagreed and 12.20% were neutral. The mean score of the survey question was 4.02, with a standard deviation of 1.14. This implied most of the managers agreed Athi Water Services Board partners with donors in the implementation of its activities. Furthermore, 66.20% of the managers agreed Athi Water Services Board submits periodic reports to donors for specific funded projects, 17.60% disagreed and 16.20% remained neutral. The mean score of the survey question was 3.93, with a standard deviation of 1.25. This implied that in most cases, the Athi Water Services Board submits periodic reports to donors for specific funded projects.

In addition, 63.50% of the managers agreed the laws that govern the water sector in Kenya are reviewed from time to time, 20.30% disagreed and 16.20% were neutral. The mean score of the survey question was 3.61, with a standard deviation of 1.26. Besides, 77% of the managers agreed Athi Water Services Board is regulated by various government agencies, 4.10% disagreed and 18.90% remained neutral. The mean score of the survey question was 4.05, with a standard deviation of 0.87. This implied that the Athi Water Services Board is regulated by various government agencies as was supported by most of the managers. The average mean score of the survey questions was 3.91, with a standard deviation of 1.12. This implied that most of the managers agreed that Government Legislation and those from Donors influence the governance of the Athi Water Services Board. Further, the manager from the senior management level indicated, "*government plays a key role in the governance of Athi Water Servive board through direct involvement in the decision making process*" [Senior managers, 2020]. In addition, the functional manager noted, "*there is a high partnership between the Board members, government agencies and with donors in the process of execution of its activities*"[Functional Manager, 2020].

4.1.6 Descriptive Statistics of Governance

The descriptive statistics of governance is presented in Table 6.

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Table 6: Descriptive Statistics of Governance

Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	SD
Regular reporting has improved the governance in the board	4.10%	14.90%	18.90%	39.20%	23.00%	3.62	1.12
The challenges affecting the board have influenced the governance	6.80%	8.10%	33.80%	29.70%	21.60%	3.51	1.13
Regular stakeholder participation has increased the efficiency in governance	1.40%	10.80%	29.70%	32.40%	25.70%	3.70	1.02
Donors are willing to continue funding the activities of the board since the governance has improved	2.70%	12.50%	23.00%	36.50%	25.40%	3.78	1.05
Athi Water Services Board maintains a good working relationship with her stakeholders	5.40%	8.10%	16.20%	37.80%	32.40%	3.84	1.14
Athi Water Services Board has put in place measures to overcome challenges that hinder the realization of its mandate	2.70%	14.90%	13.50%	45.90%	23.00%	3.72	1.07
Average						**3.70**	**1.09**

Based on the descriptive statistics presented in Table 6, 62.20% (39.20% +23.00%) of the managers agreed regular reporting has improved the board's governance, 19% (4.10%+14.90%) disagreed and 18.90% remained neutral. The mean score of the survey question was 3.62, with a standard deviation of 1.12. This implied that most managers supported the idea that regular reporting has improved the governance in the board. Moreover, 51.30% of the managers agreed the challenges affecting the board had influenced the governance, 14.90% disagreed and 33.80% remained neutral. The mean score of the survey question was 3.51, with a standard deviation of 1.13. Besides, 58.10% of the managers agreed regular stakeholder participation had increased the efficiency in governance, 12.20% disagreed and 29.70% were neutral. The mean score of the survey question was 3.70, with a standard deviation of 1.02. This implied that regular stakeholder participation is critical in enhancing the efficiency of governance.

Furthermore, 61.90% of the managers agreed donors are willing to continue funding the activities of the board since the government has improved, 15.20% disagreed and 23.00% remained neutral. The mean score of the survey question was 3.78, with a standard deviation of 1.05. This indicated that most of the managers agreed donors are willing to continue funding the activities of the board since the governance has improved. Further, 70.20% of the managers agreed Athi Water Services Board maintains a good working relationship with her stakeholders, 13.50% disagreed and 16.20% remained neutral. The mean score of the survey question was 3.84, with a standard deviation of 1.14. Besides, 68.90% of the managers agreed Athi Water Services Board has put in place measures to overcome challenges that hinder the realization of its mandate, 17.60% disagreed and 13.50% remained neutral. The mean score was 3.72, with a standard deviation of 1.07. This

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implied Athi Water Services Board has put in place measures to overcome challenges that hinder the realization of its mandate. The average mean score of the survey questions of governance was 3.70, with a standard deviation of 1.09. This implied that most of the managers agreed with most of the developed questions of governance. Further, the functional manager indicated, "*the governance in the board after the reforms have been effective and tremendous changes has been witnessed.*" [Functional manager, 2020]. In addition, a top level manager reported, "*the reforms have increased transparency and accountability in the governance at the board" [Top manager, 2020].*

4.2 Correlation Analysis

The correlation analysis shows the association between the independent variables and the dependent variable. Therefore, the correlation results are shown in Table 7

Table 7: Correlation Analysis

Variable		Governance	Coverage	Reporting	Stakeholder participation	Challenges
Governance	Pearson Correlation	1.000				
	Sig. (2-tailed)					
Coverage	Pearson Correlation	.726**	1.000			
	Sig. (2-tailed)	0.000				
Reporting	Pearson Correlation	.734**	.666**	1.000		
	Sig. (2-tailed)	0.000	0.000			
Stakeholder participation	Pearson Correlation	.611**	.590**	.565**	1.000	
	Sig. (2-tailed)	0.000	0.000	0.000		
Challenges	Pearson Correlation	-.458**	-.295*	-.483**	-0.224	1.000
	Sig. (2-tailed)	0.000	0.011	0.000	0.055	

The correlation results from Table 7 shows that coverage was positively and significantly associated with governance (r=..726, p=.000). Also, reporting and governance was positively and significantly associated (r=.734, p=000). Moreover, the results show that stakeholder participation was positively and significantly associated with coverage (r=.611, p=000). Likewise, a negative and significant association exists between challenges and governance (r=-.458, p=000). The results concur with the findings of Schliemann and Bovens (2010) who noted that reporting increases transparency and ensures effective governance. Moreover, Barreiro (2013) found that incompetence of the management and rampant corruption cases have slowed down implementing the water reforms in many countries. Further, Munyao (2018) indicated institutions that are supposed to spearhead the water protection are faced with numerous challenges such as lack of support, funds, corruption, poor coordination that negatively influence governance.

https://doi.org/10.53819/81018102t5012

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4.3 Regression analysis

The section comprises model fitness, analysis of variance and regression of coefficient. The results presented in Table 8 indicate the model fitness

Table 8: Model Fitness

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.823a	0.677	0.659	0.484157

Predictors: (Constant), Coverage, reporting, stakeholder participation, challenges

The results from Table 8 demonstrate that coverage, reporting, stakeholder participation and challenges were satisfactory in explaining governance at Athi Water Service Board. This was supported by the coefficient of determination, also known as the R square of 0.677 (67.7%). This implies that coverage, reporting, stakeholder participation and challenges explain 67.7% of the dependent variable's variations, which is governance.

Table 9 provides the results of the analysis of variance (ANOVA).

Table 9: Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	33.964	4	8.491	36.224	.000b
	Residual	16.174	69	0.234		
	Total	50.139	73			

The results presented in Table 9 indicate that the overall model was statistically significant. The results imply that coverage, reporting, stakeholder participation and challenges are good predictors in explaining governance within the Atrhi Water Service Board. This was supported by the F statistic of 36.224 and the reported p-value of 0.000, which was less than the conventional probability significance level of 0.05. Therefore, the independent variables (coverage, reporting, stakeholder participation, challenges) were significant in predicting governance.

Besides, the regressions of coefficient results are presented in Table 10.

Table 10: Multiple Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.261	0.41		3.075	0.003
	Coverage	0.337	0.091	0.363	3.709	0.000
	Reporting	0.241	0.081	0.309	2.961	0.004
	Stakeholder participation	0.182	0.086	0.186	2.106	0.039
	Challenges	-0.135	0.066	-0.159	-2.037	0.046

The results from Table 10 shows that coverage was positively and significantly related to governance (β=.337, p=0.000). This was supported by a calculated t-statistic of 3.709 that is larger than the critical t-statistic of 1.96. This meant a unitary increase in coverage would lead to improved governance by 0.337 units, while other factors are held constant. Moreover, a positive

https://doi.org/10.53819/81018102t5012

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and significant relationship existed between reporting and governance (β=.241, p=0.004). This was supported by a calculated t-statistic of 2.961 that is larger than the critical t-statistic of 1.96. This meant a unitary improvement reporting would lead to improved governance by 0. 241 units, while other factors are held constant. Further, stakeholder participation was found to have a positive and significant relationship with governance (β=.182, p=0.039). This was supported by a calculated t-statistic of 2.106 that is larger than the critical t-statistic of 1.96. This meant a unitary increase in stakeholder participation would lead to improved governance by 0. 182 units, while other factors are held constant. However, challenges were found to be negatively and significantly related to governance (β=.-135, p=0.046). This was supported by a calculated t-statistic of 2.037 that is larger than the critical t-statistic of 1.96. This implied a unitary decrease in the challenge would lead to improved governance by 0. 135 units, while other factors are held constant.

The results concur with the findings of Munyao (2018), who indicated institutions that are supposed to spearhead the water protection are faced with numerous challenges such as lack of support, funds, corruption, poor coordination that negatively influence governance. Further, K'Akumu (2016) reported there is poor administration of water sectors and this negatively affects the implementation of the policies. Additionally, Brikke and Rojas (2011) discovered that reporting is vital in improving the public sector's management in the World. Cost minimization can be realized through the inclusivity of all the stakeholders and establishing criteria to stop the loopholes. Okechi (2015) noted that reporting was positively related to effective governance.

4.4 Moderating effect of Government Legislation

The study sought to explore the moderating effect of government legislation on the relationship between the water sector reforms and governance in athi water services board. The moderation effect of government legislation was determined using model fitness. The model fitness is presented in Table 11

Table 11: Moderl Fitness

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.920a	0.846	0.837	0.335047

The results from Table 11 show the coefficient of determination, also known as the R square, increased significantly from 0.677 (67.7%) to 0.846 (84.6%) when coverage, reporting, stakeholder participation and challenges interacted with government legislation. This implied that government legislation moderates the relationship between the water sector reforms and governance in athi water services board. Therefore, the strength of the relationship between coverage, reporting, stakeholder participation, challenges and governance was positively moderated by government legislation. Hence the government legislation (donors) was a good moderator.

Table 12 presents the analysis of variance after the interaction.

Table 12: Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	42.393	4	10.598	94.411	.000b
	Residual	7.746	69	0.112		
	Total	50.139	73			

https://doi.org/10.53819/81018102t5012

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The results presented in Table 12 indicate that the overall model was statistically significant after the interaction of coverage, reporting, stakeholder participation, challenges with government legislation. This was supported by the F statistic of 94.411 and the reported p-value of 0.000, which was more than the conventional probability significance level of 0.05. The independent variables (coverage, reporting, stakeholder participation, challenges) remained significant in determining the governance after the interaction with government legislation. Thus, even after the interaction process of the independent variables with government legislation, they remained substantial in explaining governance.

The regressions of coefficient results after the interaction are presented in Table 13

Table 13: Multiple Regression Coefficients After the Interaction

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.5550	0.1450		10.6960	0.0000
	Coverage*Legislation	0.0620	0.0160	0.4320	3.7750	0.0000
	Reporting*Legislation	0.0470	0.0140	0.3800	3.3460	0.0010
	Stakeholder participation*Legislation	0.0340	0.0150	0.1930	2.2060	0.0310
	Challenges*Legislation	-0.0205	0.0100	-0.0640	-2.0530	0.0296

The results from Table 13 shows that coverage after interacting with government legislation was positively and significantly related to governance (β=.0620, p=0.000). This was supported by a calculated t-statistic of 3.7750 that is larger than the critical t-statistic of 1.96. Moreover, a positive and significant relationship was found between reporting after the interaction with government legislation and governance (β=.0470, p=0.001). This was supported by a calculated t-statistic of 3.3460 that is larger than the critical t-statistic of 1.96. Further, stakeholder participation was positively and significantly related to governance after the interaction with government legislation (β=.0340, p=0.0310). This was supported by a calculated t-statistic of 2.2060 that is larger than the critical t-statistic of 1.96. Lastly, challenges were negatively and significantly related to governance after the interaction with government legislation (β=-.0205, p=0.0296). This was supported by a calculated t-statistic of 2.0530 that is larger than the critical t-statistic of 1.96. The results agree with Rogers and Hall (2013) findings who demonstrated that water management is influenced by political and government interference.

5.1 Conclusions

Based on the findings, the study concluded coverage is positively and significantly associated with governance. The study also concluded coverage is positively and significantly related to governance. The study concluded that water coverage entails connecting informal sectors with sufficient water supply, developing more sources of water and enhancing the high frequency of water supply in urban areas. The study also concluded that water coverage is influenced by natural calamities. Formal water structures have been developed after the reforms to increase in coverage. Moreover, the study concluded reporting and governance is positively and significantly associated. Moreover, a positive and significant relationship exists between reporting and governance. The study concluded that effective reporting include preparation of Annual Financial statements and regular auditing of the Financial statements mostly on an annual basis. Further, the study concludes that cooperation of the internal auditors with the external auditors stimulates governance.

https://doi.org/10.53819/81018102t5012

The study concluded that stakeholder participation is positively and significantly associated with coverage. Further, stakeholder participation has a positive and significant relationship with governance. Stakeholder participation includes enabling all the stakeholders to be involved in decision making and the implementation process. Also, the study concluded that stakeholder participation has thorough consultation before making any changes in the board. The policies passed for water reforms need to consistent and easy to implement smoothly. Also enabling stakeholders to audit the books of account freely is an essential aspect of stakeholder participation. A negative and significant association was found to exist between challenges and governance. The regression results indicated challenges was negatively and significantly related to governance. The study concluded that challenges that negatively influence governance include shortages of funding, Corruption Poor infrastructure bureaucratic inefficiencies and a tremendous political influence. The study also concludes that government legislation (donors) is a good moderator that influence the relationship between the water sector reforms and governance.

6.1 Recommendations

Based on the findings of the study, it was established that a unitary improvement reporting would lead improve governance by 0. 241 units. Thus, the study recommended there should be adequate connecting of the informal sectors with sufficient water supply, developing more sources of water and enhancing the high frequency of water supply in urban areas. The study also recommended formal water structures need to be developed after the reforms to increase in coverage. There should be borehole digging. It was also found that unitary improvement in reporting would improve governance by 0. 241 units. Hence the study recommended there should be the preparation of the annual financial statements and also the annual financial statements need to be audited on an annual basis. The research also suggested the Financial statements to be submitted to Parliament and other stakeholders for scrutiny. The internal auditors to cooperate with the external auditors. There is a need for the preparation and maintenance of a strategic plan. The study also recommended that the financial department to be independent and not be influenced by management. The study found a unitary increase in stakeholder participation would improve governance by 0. 182 units. Thus, the study recommended that all the stakeholders be involved in decision making and the implementation process. Also, stakeholder holders need to be consulted before making any changes in the board. The policies passed for water reforms need to consistent and easy to implement smoothly. Also, there is a need for enabling stakeholders to audit the books of account freely. There should be more involvement of stakeholders to understand the root of the water challenges.

The study found that a unitary decrease in the challenge would improve governance by 0. 135 units. Thus, the study recommended there should be adequate funding, all the corrupt individuals need to be prosecuted and there should be an improvement in the infrastructure. The politicians need not be involved in the boards. There should be the establishment of environmental management and water catchment areas to be increased. There should be the facilitation of better services for Kenyans. Besides, there should be the rehabilitation of the dilapidated systems; including an increase in rainwater harvesting. Citizens need to be educated on the economic value of water. Water catchment programs need to be advocated. There should be the creation of a law that will govern the water sector in Kenya. The Should be high involvement of stakeholders and donors to help in the provision of clean and adequate water for the growing population in Kenya.

https://doi.org/10.53819/81018102t5012

REFERENCES

Acheampong, E. N., Swilling, M., & Urama**,** K. (2016). Sustainable urban water system transitions through management reforms in Ghana. *Water resources management*, *30*(5), 1835-1849.

Adams, E. A., Sambu, D., & Smiley, S. L. (2019). Urban water supply in Sub-Saharan Africa: historical and emerging policies and institutional arrangements. *International journal of water resources development*, *35*(2), 240-263.

Araral, E., & Wu, X. (2016). Comparing water resources management in China and India: policy design, institutional structure and governance. *Water Policy*, *18*(S1), 1-13.

Bandaragoda, J. (2016). Institutional adaptation for integrated water resources management: An effective strategy for managing Asian river basins. *Interantional Journal management*, 5(1), 98-105

Bellaubi, F., & Visscher, J. T. (2014). Water service delivery in Kenya and Ghana: an area-based assessment of water utility performance. *Water international*, *39*(7), 952-968.

Blackstock, K. L., & Richards, C. (2017). Evaluating stakeholder involvement in river basin planning: a Scottish case study. *Water policy*, *9*(5), 493-512.

Bo Jensen, A. N. (2010). *Lessons learnt & good practices from Support to the Kenyan Water Sector.* SIDA - Kenya.

Bovens, M. (2014). Two Concepts of Accountability: Accountability as a Virtue and as a Mechanism. In *Accountability and European Governance* (pp. 28-49). Routledge. London

Brondizio, E. S., & Le Tourneau, F. M. (2016). Environmental governance for all. *International journal of social Justice,72*(2), 272-279.

Cherop E. K. (2012). *Factors influencing implementation of reforms in the Water sector in Mombasa County, Kenya*. Thesis, University of Nairobi.

Cosens, B., & Chaffin, B. (2016). Adaptive governance of water resources shared with indigenous peoples: The role of law. *Water*, *8*(3), 97-104.

Dell'Angelo, J., McCord, P. F., Gower, D., Carpenter, S., Caylor, K. K., & Evans, T. P. (2016). Community water governance on Mount Kenya: an assessment based on Ostrom's design principles of natural resource management. *Mountain Research and Development*, *36*(1), 102-116.

Dill, B., & Crow, B. (2014). The colonial roots of inequality: Access to water in urban East Africa. *Water International*, *39*(2), 187-200.

Emenike, C. P., Tenebe, I. T., Omole, D. O., Ngene, B. U., Oniemayin, B. I., Maxwell, O., & Onoka, B. I. (2017). Accessing safe drinking water in sub-Saharan Africa: Issues and challenges in South–West Nigeria**.** *Sustainable cities and society*, *6(1), 263-272.*

Findlay, A. M. (2006). The importance of census and other secondary data in development studies. *Doing Development Research*, 5(2)262-271.

Fulazzaky, M. (2014). Challenges of integrated water resources management in Indonesia. *Water*, *6*(7), 2000-2020.

https://doi.org/10.53819/81018102t5012

Global Water Partnership. (2010). *Intergrated Water Resources Management, TAC backgound Paper No. 4.* Sweden: GWP, Stockholm.

Heinrich Boll Foundation. (2004). *Water Privatization in Kenya.* Global issue paper, No. 8.

Ifejika Speranza, C., Kiteme, B., Wiesmann, U., & Jörin, J. (2018). Community-based water development projects, their effectiveness, and options for improvement: lessons from Laikipia, Kenya. *African geographical review*, *37*(3), 192-208.

K'Akumu, O. A. (2016). Sustainability prospects for water utilities privatization in Kenya. *International Journal of Technology Management & Sustainable Development*, *5*(3), 271-280.

Kenya Water for Health Organization (KWAHO). (2009). *Enhancing water and sanitation governance in kenya:Human Rights based approach to reforms in the Kenya water sector.*

Matondo, G. (2012). A comparison between conventional and intergrated water resources planning and management. *Physiscs and chemistry of the earth*, 7(2), 83-88.

McCord, P., Dell'Angelo, J., Baldwin, E., & Evans, T. (2017). Polycentric transformation in Kenyan water governance: A dynamic analysis of institutional and social-ecological change. *Policy Studies Journal*, *45*(4), 633-658.

Mengistu, M. M. (2015). The root causes of conflicts in the Horn of Africa. *American Journal of Applied Psychology*, *4*(2), 28-34.

Morgan, C., Bowling, M., Bartram, J., & Kayser, G. L. (2017). Water, sanitation, and hygiene in schools: Status and implications of low coverage in Ethiopia, Kenya, Mozambique, Rwanda, Uganda, and Zambia. *International journal of hygiene and environmental health*, *220*(6), 950-959.

Munyao, J. M. (2018). *Water pollution in a riparian community: The case of river Athi in Makueni County, Kenya* (Doctoral dissertation).

Okechi, D. O (2015). The Influence of Water Sector Reforms On Accessibility To Water In The Rural Areas: A Case Study Of Kitui Central Constituency. Journal Of Management, 2 (1), 16- 23

Poddar, R., Qureshi, M. E., & Shi, T. (2014). A comparison of water policies for sustainable irrigation management: the case of India and Australia. *Water resources management*, *28*(4), 1079-1094.

Rogers, P., & Hall, A. W. (2013). *Effective water governance*(Vol. 7). Stockholm: Global water partnership.

Schwartz, K., Tutusaus, M., & Savelli, E. (2017). Water for the urban poor: balancing financial and social objectives through service differentiation in the Kenyan water sector. *Utilities Policy*, *8(2)*, 22-31.

Teece, D. J. (2018). Dynamic capabilities as (workable) management systems theory. *Journal of Management & Organization*, *24*(3), 359-368.

https://doi.org/10.53819/81018102t5012