DETERMINANTS INFLUENCING PERFORMANCE OF REGULATORS IN KENYA, 
A CASE OF WATER SERVICES REGULATORY BOARD.

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ABSTRACT

The objective of this study was to find out the determinants affecting performance of Water Services Regulatory Board. The study design was a descriptive methodology. It entailed the analysis of different variables which have an influence on performance. The variables included the influence information systems, funding, staffing levels and legislation, had on the performance of Wasreb. The study used questionnaires to collect primary data from all the management staff in Wasreb. Secondary data was obtained from government reports, donor reports and journals. The study used simple random sampling.

From the above findings, the study concludes that staffing levels was the most significant aspect in improvement of performance of Wasreb in the water services sub-sector. The study concludes that most of the water services sector institutions are aware performance of regulator in the water services sub-sector is crucial. The study noted that most staff had been trained on information systems and that they possess the right skills on information systems. The study concludes that information systems influence performance in the water services sub-sector of Wasreb.

The study noted that the legal framework still needs to be reviewed. The main weakness of the Water Act 2002 is that there are no rules to make it operational. This meant that enforcement is still seen as a major challenge. The study therefore concludes that legislation influences performance of Wasreb as a regulator. The study also noted that funds influences performance of Wasreb as a regulator in the water services sub-sector. Funding improved the services of the
institutions and ensured smooth processes of the daily activities in the offices. However, the regulatory levy amount required review so as to improve further services of Wasreb. It was also noted that revenue allocation and prioritization of projects and activities are vital in improving service delivery and increasing revenue generation. Staffing levels were also found to be low especially for the Wasreb staff. Less visits to inspect WSPs and WSBs had an impact in reporting on performance by Wasreb.

In general, the study concludes that the information system, funding, staffing levels and legislation are important factors to be considered in the performance of Wasreb.

**Keywords:** Determinants influencing performance of regulators in Kenya.

**Introduction**

Regulation is the process of dissemination, monitoring, and enforcement of rules, defined by primary and/or delegated legislation. Depending on the needs of a country, governments develop different types of regulations which suit their contexts. Regulation in the water sector is not a new process in Africa. The history of the recent reform processes can be traced back to the 60s and 70s when pollution, quality of safe drinking water and encroachment of water resources became rampant. Many developments in Africa emerged in order to improve access to water and sanitation services. However, these reforms faced challenges of limited knowledge and experience, lack of political will political interference and conflicts with other government policies. In the 70s and 80s, water services worsened due to shortage of funds within government institutions, poor management, misuse of funds, low or charges for services at all and lack of information. Urban migration led to higher demands which could not be met.

The United Nations’ 2006 World Water Development Report argues that the roots of water crisis in water are poverty, inequality and unequal power relationships. Therefore, to reduce the crisis water management is essential. To improve water management, developing countries need comprehensive knowledge, capacities and clear guidelines in dealing efficiently with Water management. Improved water management, is a holistic process through which people, organizations and societies continually mobilize, maintain, adapt and expand their ability to manage their own sustainable development.
Effective regulatory accounting and reporting has been shown to be of key importance, with a number of developments in recent years. First, effective accountability is accepted as the basis for effective regulation and regulatory governance. Reliable information is required so as to manage water supply and sanitation services. Many regulators use information technology based WSS systems which complement them in managing, monitoring and improving performance of WSPs and WSBs. Information technology adds value by providing regulators, policy makers and service providers with the basic data for improving water services and with the instruments to measure nationwide coverage. Software solutions can promote accountability and transparency in the water sector. Water utilities should be managed in a manner that is sustainable for future generations and does not have adverse effects on the environment (Hukka & Katko 2004).

The engagement of the public in the process of creating a regulatory framework is also seen to be important in regulation of water services because, as Black (2002) points out regulatory conversations are important in the more general situation in which regulators operate in a dynamic context in which problem definitions are complex and shifting, and the consequences of regulatory action uncertain (Black 2002). Engagement to the public by the regulator can be done through reporting about the progress in the sub-sector, holding conferences and publications. This helps in understanding of the complexity of water regulation, and posits the notion of ongoing engagement with stakeholders in the creation and implementation of the regulatory framework. It also fits with the work of Black (2002) who discusses the need for a regulatory discourse to ensure that a common understanding of the regulatory objectives and instruments is created amongst all players. Consumers therefore will have an influence in the service they get from WSPs.

**Statement of the Problem**

The WHO/UNICEF Joint Monitoring Programme (JMP) for Water Supply and Sanitation in March 2012 produced a report indicating that over 2 billion people gained access to improved drinking water in the period 1990-2010. The report further estimated that since 1990, 322 million Africans have gained access to improved drinking water source and 189 million gained access to
an improved sanitation facility. However, the report cautioned that 65 million more people in Africa lacked access to an improved drinking water source than did in 1990 and population without improved sanitation facility increased by 197 million since 1990. Therefore more needs to be done towards monitoring of water services.

A perception survey on the Water Reforms by Infotrack Harris carried out in December 2011 found out that 59% of Kenyans were satisfied with the provision of water and sewerage services in their area, 56% felt services were better than before the reforms, 66% quality indicated that quality of water is clean and 62% said water was affordable. Overall seven out of ten urban water users have seen positive changes in the way water has been managed since decentralization. The respondents also rated the MWI performance as 5.7 out of 10 based on public satisfaction, performance ratings of the other national water institutions (Wasreb, Water Services Trust Fund, Water Resources Management Authority (WRMA)) were more or less the same with an average of 5.3. The Water Service Boards scored a mean rating of 5.9 and the water companies had an average performance rating of 6.2. However there are key challenges facing the water sector: water rationing and shortages (35%); poor sewerage systems (32%); and perceived high water bills (27%). Other challenges include neglecting duties like pipe repair (3%) and governance issues (2%). Water quality is the top concern of consumers (62% of the respondents) followed by availability (19% of the respondents) and pricing (15% of the respondents) respectively. Most of the studies done relate to performance of water utilities, funding in the sector, governance, consumer rights to service provision but none focuses on the impact water services sub-sector will have if performance of the regulator is improved. This study therefore tries to fill the research gap by carrying out a case study of Wasreb in assessing the determinants influencing performance of Wasreb as a regulator in the water services sub-sector.

**Objectives of the Study**

**General Objective**

The general objective of the study was to assess the determinants influencing performance of regulators in Kenya, a case study of Water Services Regulatory Board.
Specific Objectives

i. To establish how information systems affect the performance of Water Services Regulatory Board

ii. To find out the effects of funding on performance of Water Services Regulatory Board

iii. To examine how staffing levels influence performance of Water Services Regulatory Board

iv. To determine the effects of legislation on performance of Water Services Regulatory Board

Literature Review

Work system theory

Work system theory (WST) is an evolving, multi-faceted body of theory for describing, understanding, analyzing and designing systems in organizations (Alter, 2010). It consists of three major components: the work system, work system framework and work system life cycle model. It speaks about how people operate the machines in their organizations to produce end products successfully. Alter defined a work system as a system in which human participants and/or machines perform work using information, technology, and other resources to produce products and/or services for internal or external customers. He also defined work system framework as a visual representation of a static view of a work system's form and function during a particular time period; minor adaptations may occur within that configuration. The work system framework consists of nine elements that should be included within a basic understanding of the work system: customers, products and services, processes and activities, participants, information, technologies, environment, infrastructure, strategies. (Alter, 2006b, 2008a, 2008b, 2010a). Work system life cycle model (WSLC) is a dynamic view of how work systems change over time through iterations that may combine planned and unplanned change. Phases include operation and maintenance, initiation, development, and implementation. (Alter, 2006b, 2008a, 2008b, 2010d).
Strategic Sustainable Investing Theory

Strategic Sustainable Investing theory is a theory that ensures companies are viable. It ensures financial investment will offer a competitive risk-adjusted return, while providing investment capital to companies that are actively attempting to become more sustainable. It implies lower exposure to sustainability-related risks and it considers financial metrics together with environmental, social, and governance (ESG) aspects, as well as strategy analyses to educate investment decision-making. Characteristics of SSI include lower sustainability risk exposure, defines sustainability based on scientific consensus, primarily driven by movement towards sustainability and considers financial, ESG, and strategy analysis. SSI operates by prioritizing investment capital allocation to companies that are taking the lead in shifting away from unsustainable behavior towards new ways of doing business. This capital allocation will provide an incentive for companies to move forward in a sustainable direction. This movement is reported in corporate social responsibility (CSR) and other extra-financial reports, but is also recorded in traditional areas of a firm’s financial balance sheets.

By incorporating sustainability investment and returns into traditional financial reporting, a clearer picture of the bottom-line impact of a company’s actions towards sustainability is made available. In this positive reinforcing loop, greater investor returns and increased movement towards sustainability are generated with every cycle.

Staffing theory

Staffing Theory is a social psychology theory that explores the effects of behavior settings being either understaffed or overstaffed (Wicker A. W., 1979). Understaffing refers to the idea that there are not enough people for what for the behavior setting promotes, whereas overstaffing is the overabundance of people. The term staffing theory was previously known as manning theory, but was renamed.

Staffing theory focused on the idea that when there are fewer people available for a number of behavior settings, there is pressure on individuals to take on responsibilities. A behavior setting is a physical location, temporally or physically bound, that influences the behavior of the people within it. The concept of manning theory comes from research done by Barker & Gump entitled...
Big School, Small School. Synomorphy, which is the degree of fit between a behavior setting and the individuals within it, is an important concept for understanding Staffing Theory. When a place is high in synomorphy, the number of people and the types of tasks being performed match what the behavior setting provides, and the individuals can achieve maximum productivity (Barker, Roger & Gump, Paul, 1964).

The biggest implication that we get from this theory is that if we want people to get the most out of an experience, but not necessarily be an expert in any one particular field of study or work area, they should have a good balance between the number of people working and the amount of people that the environment provides for. This way they have the social pressure to prepare and perform for a given task, and should have diverse capability based on whatever they get involved with. There are a few dangers that must be looked out for when trying to find this balance. Too many activities or too much labor might result in the individual not being able to complete anything, thus doing poorly in multiple categories instead of excelling. In contrast having too few responsibilities will likely not keep the person interested and may cause problems as well.

**Pecking Order Theory**

Pecking order theory (or pecking order model) states that the cost of financing increases with asymmetric information. Financing comes from three sources, internal funds, debt and new equity. Companies prioritize their sources of financing, first preferring internal financing, and then debt, lastly raising equity as a “last resort”. Hence: internal financing is used first; when that is depleted, then debt is issued; and when it is no longer sensible to issue any more debt, equity is issued. This theory maintains that businesses adhere to a hierarchy of financing sources and prefer internal financing when available, and debt is preferred over equity if external financing is required (equity would mean issuing shares which meant 'bringing external ownership' into the company). Thus, the form of debt a firm chooses can act as a signal of its need for external finance.

The pecking order theory is popularized by Myers and Majluf (1984) when he argues that equity is a less preferred means to raise capital because when managers (who are assumed to know better about true condition of the firm than investors) issue new equity, investors believe that
managers think that the firm is overvalued and managers are taking advantage of this overvaluation. As a result, investors will place a lower value to the new equity issuance.

**Empirical Review**

Information systems have a huge impact on an organization’s performance as it enables the organization to improve and manage its resources effectively. In order to have successful results and maximize the use of information systems, organizations need to align their strategies with the information systems they purchase. Many researchers have done a research on alignment of organization’s strategies with information system. Li and Ye, (1999) did a research on the relationship between aligning a firm’s strategy with IS and this study proposed that there is a positive relationship between strategy and strategic information technology. A firm can maximize the value from its IT investments by aligning them with business strategies because IT improves scope economies and coordination. A study conducted by Shin (2001) found out that a firm can maximize the value from its information technology (IT) investments by aligning them with business strategies because IT improves scope economies and coordination. However it is important to note that the disparity between the firm requirements and what the new technology offers will result to poor performance.

The Water Act 2002 clearly gives a legal framework in terms of water management in Kenya. The Act introduced new water management institutions to govern water and sanitation issues in Kenya. However, it assumes the operationalization of activities of many institutions and requires additional rules to be formulated for successful implementation. Therefore its effectiveness would be largely dependent on continuous monitoring on its implementation. Many countries have continuously improved water laws based on their own experiences and lessons learned from successful law implementers. While legislation empowers regulators, an overly legalistic approach towards water quality and supply is self-defeating. Many organizations tend to rely on legislation push forward water sector reforms yet many are not enforced despite being set out in law.

Unfortunately, harmonizing and updating sector legislation can be a daunting task. Strong political commitment and tenacity is needed to drive the process forward. Furthermore, while the recipients of evaluations (politicians and bureaucrats) seek to solve policy problems, they are
also eager to preserve and strengthen their own power and the power of their supporting group or party. Political decision-making is often lacking not expertise, but the willingness to use it (Mayntz 2009). There must be commitment from both the policy makers and the institutions that implement the laws. While the advantage of developing sub-sector strategies separately may allow greater focus on one sub-sector at a time, the disadvantage is that major effort may be required to harmonize strategies with other sub-sectors in future (GTZ, 2008).

Data Analysis/Findings

Regression Analysis

This is the process of estimating the relationship between dependent variable and independent variables. From the findings in the table below R squared was 0.71. This is an indication that there was variation of 71.2% of the variations between the independent variables and the dependent variable. This means that the independent variables of information system, funding, staffing levels and legislation portray a strong relationship to the dependent variable which was performance in reporting.

Table 4.1: Model Summary

<p>| Model Summary |
|------------------|------------------|------------------|</p>
<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.742a</td>
<td>0.712</td>
</tr>
</tbody>
</table>

ANOVA
The ANOVA table produced is shown in table 4.8.
Table 4.2 ANOVA

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>.442</td>
<td>4</td>
<td>.110</td>
<td>6.258</td>
<td>.001a</td>
</tr>
<tr>
<td>Residual</td>
<td>.530</td>
<td>30</td>
<td>.018</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>.971</td>
<td>34</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.9 shows that the ANOVA findings, from the results it is clear that the model is statistically significant for the study (F=6.258, P=0.001) since the p-value is less than 5%.

**Coefficients**
The coefficients of the regression are shown in table 4.10.

Table 4.3 Multiple Regression Analysis

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized coefficients</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>B</td>
<td>P-values</td>
</tr>
<tr>
<td>Constant</td>
<td>3.311</td>
<td>0.01</td>
</tr>
<tr>
<td>Information system</td>
<td>0.08</td>
<td>0.0027</td>
</tr>
<tr>
<td>Funding</td>
<td>0.7</td>
<td>0.0012</td>
</tr>
<tr>
<td>Legislation</td>
<td>0.017</td>
<td>0.0038</td>
</tr>
<tr>
<td>Staffing levels</td>
<td>0.268</td>
<td>0.0010</td>
</tr>
</tbody>
</table>

Table 4.9 shows the coefficients of regression results. From the findings, all the variables under study were significant. This is shown by statistics that staffing levels was ranked the most significant variable (0.0010) followed by funding (0.0012), information system (0.0027) and Legislation (0.0038) respectively.

**REFERENCES**
Tower of Babel?" Communications of the Association for Information Systems, (3)10, pp. 1-87.


