

**STAFF SKILLS, RESOURCE AVAILABILITY AND IMPLEMENTATION
OF ISO 9001:2008 STANDARD IN FOUR SELECTED GOVERNMENT
MINISTRIES IN KENYA**

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Abstract

Organizational performance has become an essential concept in all institutions. Ideally, customers expect reliance and availability of services from organizations whether public or private. Despite the introduction of performance appraisal system in 2006, the strategies of Vision 2030 and the ISO policies, implementation of the ISO 9001:2008 in public sectors has been problematic due to certain salient factors. Therefore, the main aim of the study was to address the factors affecting implementation of ISO 9001:2008 standard in four selected government ministries in Kenya. The study was anchored on the theory of planned behavior. The results would also benefit the certification bodies on appropriate certification process approach. Questionnaires were used to gather the requisite data. Survey research design was employed to explain the general methodology of the study. The target population included all the 834 employees working at the selected ministries at the headquarter offices from whom 250 respondents were sampled using simple and stratified random sampling. Stratified was used to isolate the different cadres of staff based on their levels, whether management or middle level. Questionnaires were employed to get data from the respondents and the data generated was processed using SPSS, statistically analyzed using both descriptive and inferential statistics and presented it using pie charts and Tables. The results indicated that there was a significant positive effect of skills and availability of resources on implementation of ISO 9000 standards in selected ministries. It is recommended that government ministries should ensure that there are adequate resources for the implementation of ISO 9001:2008 standard and should hire qualified employees and train them on ISO 9000 standards to enhance smooth implementation.

KeyWords: Implementation, certification, ISO, ISO 9000 standards, selected government ministries, Kenya.

INTRODUCTION

Basically, adoption of ISO certification has revealed to be a proactive strategy that improves organization performance (Zhang, 2010). ISO 9001:2008 deals with essentials of systems of quality management that has eight principles of management which standards are based on. ISO 9001:2008 certifications were created for quality attainment and provision of defined steps for the development of organizational quality management system that is for monitoring progress of product and services as they pass through each stage of production. According to Zhaojun and Bhaofeng (2012) there are significant factors that have been found to affect implementation of any ISO standard and they include, staff attitudes which are feelings towards a system, lack of adequate resources, poor planning, staff training, leadership and strategic focus. However, the extent to which these variables have influenced ISO certification implementation in the Kenyan context considering the different nuisances in operations and environment is significantly uninvestigated and hence the need for the present study.

Organizations are constantly looking for modalities to improve and expand their business in terms of quality and quantity. Adoption of ISO certification has revealed to be proactive strategy improves organization performance (Zhang, 2010). ISO 9001:2008 deals with essentials of systems of quality management and has eight quality principles. Subba, Ragu-Nathan and Solis (2007) ISO 9001 has the requirements that organizations have to fulfil. However, third party certification bodies provide validation to those organizations that meet the requirement of the standard. ISO 9001 is a commonly used management tool in most organizations today but has also received a fair share of criticisms from other quarters for being wasteful instead of helping organizations. Various scholars have been arguing about the importance of ISO 9001 on company performance. Studies shows that organizations can achieve internal improvements (list some citations that hold this view) while similar studies also indicating standards are too generic to cause organization to have improvements (list some of those authors who hold this divergent views).

Zhaojun and Hoofing (2012) in a study in South Africa noted that ISO 9001:2008 has become an inevitable fixture in the public service of the country. However, there has been a concern as regards implementation of the standards due to poor attitudes, lack of staff training, lack of resources, poor leadership and the changing standard requirements. The study therefore noted that there is need to educate the staff and public on the need to keep abreast with changes in requirements to suit new trends. How far this is true for the Kenyan situation remains largely unknown. Consequently, studies done in Kenya (Owino, 2010; Hanja and Anyango, 2011) show that while ISO 9001:2008 is significant, what seem to lag behind is the implementation aspects. The studies do not however go as far as to explain or give data as to the factors affecting the said implementation, leaving a huge gap that this study hopes to fill.

Statement of the problem

Studies have shown that implementation of ISO 9001: 2008 has received major obstacles in public offices in Kenya (Owino, 2010; Wanjua and Anyang, 2011; Zhang, 2010). However, the

reasons given like bureaucratic procurement procedures and lack of staff training among others (Quazi& Jacobs, 2013; Subba, Ragu-Nathan and Solis, 2007) have largely been disputed (Kelerman, 2009).

Further, the research on which these reasons are stipulated are older reviews and conflicting to the extent that there is need for a current study that is cognizant of new realities. This is especially necessary considering the dynamic nature of some government policies particularly as regards quality and standardization and the implementation attendant to them. The lack of fresh scholarly explication of the factors affecting implementation of ISO 9001:2008 standard is thus a major gap that the present study hoped to fill.

Objectives of the study

The underlying objective of this research study was to determine the factors affecting implementation of ISO 9001:2008 standards in four selected government ministries. The specific objectives were to examine to what extent resource availability affects implementation of ISO 9001:2008 standards in selected government ministries and establish the effect of staff skills on implementation of ISO 9001:2008 standards in selected government ministries. The two null hypotheses were H_{01} : Staff skills do not significantly affect implementation of ISO 9001:2008 standards in selected government ministries. H_{02} : Resource availability does not significant affect implementation of ISO 9001:2008 standards in selected government ministries.

Literature Review

For any system to succeed human intelligence is required to facilitate the process, quality system is not an exemption to this as sophisticated as it seems. The analogy points out the importance of human capital in putting quality system to function properly. The potential of quality system cannot be achieved unless the entire staffs understand its functions (Quazi & Jacobs, 2013). The implementation of ISO requires more than defining objectives, documentation, activation and planning. If staffs are not well and properly trained at all levels no system can guarantee effective results. ISO 9001 has a training requirement that indicates all staff needs to understand how their roles relate to the performance of the quality management system and its applicability. When staffs are trained in ISO implementation especially the lead team this resulted into more efficient and effective system implementation procedure. Staff training is important because it increases productivity, motivates and inspires employees in knowing how important their duties are and also provide them if the necessary inform and knowledge to perform their duties (Kelerman, 2009).

Organizations need to promote awareness of the implementation that should be well planned that includes training schedules. Training in quality should be an ongoing organization activity and should not be carried out during implementation alone but when the system is fully operation too, all new employees should be well inducted and existing ones should have regular refresher training especially after major changes have been introduced in the system. Studies shows that

the implementation of quality system is always associated with increased staff trainings (Kelerman, 2009).

A descriptive study targeting 332 staffers of organizations in Sweden by McNamara (2011) explains that training is an activity that changes and influences human behaviour with the following benefits increased motivation, job satisfaction, improves staff morale, increased efficiencies in processes, increased innovation strategies and reduces staff turnover. The pioneers of quality practice placed more emphasis of staff development, education and training for the improvement of quality performance. Organization that need to implement quality management system have consistently found it necessary to invest in human capital through training in order to improve performance improvement in customer satisfaction and improved productivity (Zakuan, Muniandy, Saman, & McArif, 2012). According to Zakuan, Muniandy, Saman and McArif (2012) staff require training in order to manage the expansion of their work role following the designation of accountability for quality, employees also require training for non technical skills to be able to take part in ISO implementation and in the long term provide skills in order to flexibility respond to changing customers needs and market requirements.

Sharma et al (2013) did a comparative empirical review on articles touching on ISO implementation as an angle of planned behaviour. The study highlighted significant and salient results after a content analysis of the descriptive and explanatory articles touching on ISO implementation and training and development of employees as a strong and significant element of ISO accreditation and implementation. The findings of the study were that in the scheme of things and comparatively, training and development is important for any organization even those that are struggling in terms of profitability, return on assets and equity and those that are emerging in terms of start-ups or rebranding. The study found out that training and development however was not very integral to ISO certification and implementation strategy but more as an operational element to equip staff for better work. According to Sharma et al (2013) is to deny the staff a positive attitude and appreciation of training and development as a ISO implementation element that would not only equip staff for better service but make them ready in case of any management transition or succession.

A study carried out by Downen and Docking (2009) in the US indicates that the cost of implementation ISO 9001 that include training, hiring of auditors and developing procedures ranges between \$ 97,000- \$ 560,000 which depends on complexity of the operations, the organization size, the state of quality system and types of product and services. A similar study was conducted in Australia by Aniflos and Yates (2007) that indicated that cost of implementation ranges from \$ 30,000-\$400,000 which includes internal training budget, cost of certification, size of the firm among others. Quality system report indicated that the process of certification cost \$ 245,000. The cost of certification is pegged on the following the complexity of the process, the size of the firm, existing system in place, audit surveillance fees. Certification and implementation of ISO 9001 is an expensive exercise that requires money, time and full support and involvement of all stakeholders in the organization (Legcevic, 2008). The cost of implementation is not a recurrent expense and is generally related to planning and the setup of

the quality management system; quality expert; consulting fees, training cost of staff and audit fees for certification

Theoretical Literature

Institution Theory

Institutional theory puts more emphasis on social behaviour which considers organization process by which structures, schemas, rules, norms and routines that are established as authoritative guidelines. According to the theory organization strategies are influenced by other external factors that include political, social and economic pressure and decision making within the firm seek to legitimate their practices to other stakeholders. The study adopted this theory because it explains the changes brought about in organization by social values, regulations that affect decision and technological advancements. Institution theory has put more emphasis on the organization environment are important in shaping firms structure and actions, the theory states that organization decisions are not purely driven by rational goals of efficiency but by cultural and social factors and apprehensions for acceptability. Organizations are related by structures, routines, cultures and operate at several levels. According to institutional theory organizations become similar due to isomorphic pressure and pressure for sincerity. Which implies that organization in the same field tend to become homologous over time, as competitive and customer pressure motivate them to copy organization leaders. Organizations are likely to be induced to adopt what fellow organization by external isomorphic pressures from competitors, government, trading partners and customers (Othman, 2006).

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Contingency Planning Theory

Contingency planning also referred to as business continuity planning is theory that is well associated with threat management, the basis of this theory is that since all business risk cannot be fully eliminated in practice. With reference to this study contingency theory can be used to mean controls, plans, process and the totality of activities, it's the act of preparing for major catastrophe and occurrences, articulating malleable strategies and rationalizing appropriate assets that will come into play in the event. In this study contingency planning theory involves the preparing for the unexpected and planning for the unknown. The basic purpose of contingency planning theory is to minimize the adverse consequences of catastrophe and occurrences (James, 2013). Contingency Planning Theory will be adopted in this study because it describes and explains how changes in technological advancement, social values and regulations that affect decision regarding implementation process.

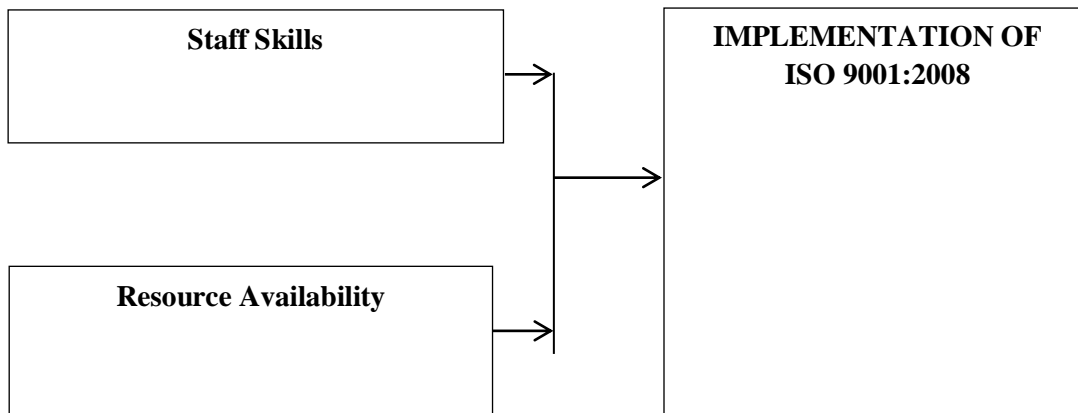
Conceptual Framework

As earlier noted, according to Zhaojun and Bhaofeng (2012) there are significant factors that have been found to affect implementation of any ISO standard and they include, staff attitudes which are feelings towards a system, lack of adequate resources, poor planning, staff training, leadership and strategic focus. However, the extent to which these variables have influenced ISO certification implementation in the Kenyan context considering the different nuisances in operations and environment is significantly uninvestigated and hence the need for the present study. For the purposes of this study two significant variables have been investigated and they are: staff skills and resource availability. The model is used to offer a diagrammatic representation of the effect of the two factors, skills and resource availability on implementation of ISO 9001:2008.

The conceptual framework is presented in a schematic interpretation.

Independent variables

Dependent Variable



RESEARCH DESIGN AND METHODOLOGY

Research Design

Research design that is descriptive in nature is appropriate for studies that have specific issues where problems have been defined (Mugenda & Mugenda, 2003). The issues in the study being the factors affecting implementation of ISO 9001:2008 standards in four selected government ministries in Kenya, are thus geared to address the essentials why, who, when, what, and how questions in the research. The study sought to describe a situation through the study of variable relationships. The study describes and defines the subject matter by profiling issues under study (Cooper & Schindler, 2008). It also helped the researcher to critically analyze the problem in question with a view of drawing more detailed and specific information about the subject that can be useful to the management. More often than not, it is used as a precursor to more statistical research and provides valuable pointers as to which variables are test worthy quantitatively (Kothari, 2004). The research study targeted the 834 top management and middle management staff working at the four selected government ministries at the Headquarters.

Table 1: Table showing target population

Ministries	Target Population
East Africa Community	204
Energy and Petroleum	264
ICT	213
Gender	153
Total	834

Source: EAC, Energy and Petroleum, ICT and Gender staff Records (2017).

Stratified sampling was used to isolate the staff based on the ministry strata and a sample percentage of 30% was used to get the respondents from each strata. Kothari (2004) observed that sample drawn randomly is unbiased in a way that no number of populations has any chance of being selected more than the other. The study used stratified sampling technique which involved dividing the target population of 834 staff into strata. This method was appropriate since it gave all the respondents from each of the three strata equal chance to participate. Participants were stratified into the following categories; senior level management, middle level management and ordinary staff. A sample size of 250 staff was arrived at through proportionate stratified sampling and employing 30% of the target population, a percentage that Kothari (2004) approves and says is acceptable. Table 3.2 shows the sample size determination for the study.

Hence a sample size determined in each stratum was achieved as follows:

Table 3.2: Table showing research sample size

Ministries	Target Population	Sample Size (30%)
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East Africa Community	204	61
Energy and Petroleum	264	79
ICT	213	64
Gender	153	46
Total	834	250

Primary data was collected using structured questionnaires while secondary data was used too; these materials used included books, journals, reports, journals, magazine and internet literature. The researcher collected primary data and used secondary data for literature review. Descriptive statistics were used for data analysis. Specifically, means, averages and percentages was used in the study. The data analysis tools were simple tabulations and presentations of the report using spread sheets. The research hypotheses were tested by examining both the R values from the correlation results and the P-value at 95% confidence level from the regression coefficient results and consequently either accepted or rejected.

Regression Model

$$y_{od} = \alpha + \beta_1 (X1) + \beta_2 (X2) + e$$

Where the variables are defined as:

Y_{od}-Implementation

X₁-staff training

X₂- resources

e- Error term

RESEARCH FINDINGS AND DISCUSSION

Response rate

There was a response rate of 97.6% from all the four ministries. This response rate was considered adequate for analysis to determine the factors affecting implementation of ISO 9000 standards in selected government ministries in Kenya.

Descriptive statistical analysis**Extent of staff skills effect on implementation ISO 9000**

Respondents were asked to indicate the extent of staff skills effect on implementation ISO 9000. They responded and results were shown in the Table below

Table 4.1 Extent to which staff skills affect Implementation of ISO 9000

	Frequency	Percent
None	20	8.2
Little extent	34	13.9
Moderate extent	36	14.8
Great extent	98	40.2
Very great extent	56	23.0
Total	244	100

From Table 4.1, majority of the respondents being 40 % (98) indicated that staff skills affects implementation of ISO 9001:2008 standards in the ministries at a greater extent. Also 23 % (56) of the respondents indicated that it does at a very greater extent and this indicates that majority of the respondents cumulatively suggested that staff skills do affect the implementation of ISO 9001:2008 standards. The analogy points out the importance of human capital in putting quality system to function properly. The potential of quality system cannot be achieved unless the entire staffs understand its functions (Quazi & Jacobs, 2013). The implementation of ISO requires more than defining objectives, documentation, activation and planning. If staffs are not well and properly trained at all levels no system can guarantee effective results. ISO 9001 has a training requirement that indicates all staff needs to understand how their roles relate to the performance of the quality management system and its applicability and this indicates that staffs skills is a key requirement for implementation of ISO 9000 standards.

Extent of resource availability on implementation ISO 9000 Standards

Respondents were asked to indicate the extent of resource availability on implementation ISO 9000 standards. They responded and results were shown in the Table below

Table 4.2 Extent to which resource availability affect Implementation of ISO 9000 standards

	Frequency	Percent
None	24	9.8
Little extent	10	4.1
Moderate extent	44	18.0
Great extent	108	44.3
Very great extent	58	23.8
Total	244	100.0

From Table 4.2, majority of the respondents being 44.3 %(108) indicated that resource availability affects implementation of ISO 9001:2008 standards in the ministries at a greater extent. Also 23.8 % (58) of the respondents indicated that it does at a very greater extent and this indicates that majority of the respondents cumulatively suggested that resource availability do affect the implementation of ISO 9001:2008 standards. The cost of implementation is not a recurrent expense and is generally related to planning and the setup of the quality management system; quality expert; consulting fees, training cost of staff and audit fees for certification. A study conducted in Sweden by Carlson in 2004 established that certain organization had challenges with resources and time consumption, the survey firms indicated they had issues with assessing the time to implement the quality management system and estimated resources they would require for the process.

Pearson's Correlation analysis was done for the selected ministries and their results presented

Table 4.3. Pearson’s Correlations

		Implementation	Staff Skills	Resource Availability
Implementation	Pearson Correlation	1		
	Sig. (2-tailed)			
	N	244		
Staff Skills	Pearson Correlation	.615**	1	
	Sig. (2-tailed)	.000		
	N	244	244	
Resource Availability	Pearson Correlation	.601	.453**	1
	Sig. (2-tailed)	.000	.000	
	N	244	244	244

Wong and Hiew (2005) has postulated that any correlation coefficient value (r) that stretches from 0.10 to 0.29 is measured as weak, from 0.30 to 0.49 is deemed medium and from 0.50 to 1.0 is measured as strong. Nevertheless, Field (2005) had mentioned that any correlation coefficient that exceeds 0.8 is not acceptable to by-pass multicollinearity problems. In this case, the highest correlation coefficient is 0.734 and does not thus exceed 0.8 and hence no multicollinearity problem in this research (Table 4.3). From Table 4.3, all the independent variables (staff skills, availability) had a positive relationship with implementation of ISO 9001:2008 standards. Staff skills had a correlation ($r=0.615$, $p<0.01$) while availability of resources had ($r=0.601$, $p<0.01$). This implied that that all the variables under study have a

positive relationship with the dependent variable. Empirically, and based on the results, studies have shown that implementation of ISO 9001: 2008 has received major obstacles in public offices in Kenya, the reasons given range from inadequate infrastructure resources, lack of skills, bureaucratic procurement procedures among other.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Based on the first objective, staff skills had a significant effect on implementation on ISO 9001:2008 standards in four selected government ministries in Kenya to a great extent. It can thus be concluded that staff skills had a positive effect on the implementation of ISO 9001:2008 standards at the selected government Ministries in Kenya.

Based on the second objective, resource availability had a significant effect on implementation on ISO 9001:2008 standards in four selected government ministries in Kenya to a great extent. It can thus be concluded that resource availability had a positive effect on the implementation of ISO 9001:2008 standards at the selected government Ministries in Kenya. Based on the correlation results, staff skills had a more significant effect on implementation of ISO 9001:2008 standard than resource availability. The four ministries based on the descriptive and inferential results had a moderate implementation of the ISO standard. Basically, the implementation was not highly effective and not completely ineffective but moderate.

5.3 Recommendations

From this study the following recommendations were deduced for proper implementation of ISO 9001:2008 standards.

The human resource department of the Ministries should hire qualified employees and train them on ISO 9000 standards to enhance smooth implementation. The government should also involve other stakeholders during implementation. The Ministry leadership should budget for resources like technology and qualified staff to ensure the smooth running and effective implementation of the ISO 9001:2008 standard.

From this study, some gaps have been identified for further research where by a further study should be conducted to focus on the influence of decision making by top management towards implementation of ISO 9000 standards.

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