

# Effects of Quality Management Systems on Performance of Kenya Ports Authority

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**Abstract-** A quality management system improves organization's performance through quality service delivery and production thus enabling organizations to have a competitive edge over its competitors. In order to be successful, Quality Management (QM) practices ought to be an integral part of any organization's strategic management. Without proper monitoring of projects, poor quality of material use, and lack of proper site supervision due to inconsistent supervision may lead to poor performance in an organization. Communication is a vital tool in managing any form of business as it helps the organization in achieving its objectives. Documentation is also a limitation in the organization which deals with many stakeholders. Poorly kept records results into non-conformity due to delays caused by searching work records which are not well kept.

This study aimed at determining the effects of Quality Management System (QMS) on performance of Kenya Ports Authority. A target population totaling to 7,500 personnel from whom sample size of 116 was randomly selected from the sampled departments was used to build a basis for the research. The researcher used multi-stage cluster sampling from the sample population to achieve the desired representation from various divisions within the organization. Questionnaires, interviews and observations were used to gather the required information. A descriptive analysis was done with the help of a statistical tool. It was evident that QMS has a great positive impact on the performance of an organization through service delivery and quality production, thus giving an organization a competitive edge in the market.

**Index Terms-** Quality Management Systems, Total Quality Management, International standardization Organization, and competitive advantage

## I. INTRODUCTION

Quality management system (QMS) is a systematic approach to proactively managing quality based on documented standards and operating procedures. The best known QMSs are those based on the ISO 9000 series of quality standards. A quality management system (QMS) can be expressed as the organizational structure, procedures, processes and resources needed to implement quality management. Early systems emphasized predictable outcomes of an industrial product production line, using simple statistics and random sampling. By the 20<sup>th</sup> century, labor inputs were typically the most costly inputs in most industrialized societies, so focus shifted to team cooperation and dynamics, especially the early signaling of

problems via a continuous improvement cycle. In the 21<sup>st</sup> century, QMS has tended to converge with sustainability and transparency initiatives, as both investor and customer satisfaction and perceived quality is increasingly tied to these factors. (Cole & Kelly 2011, Juran, 2009, BSI 1991 Durai, and Balakrishnan 2011).

Quality Management System enables one to demonstrate commitment to quality and customer satisfaction, as well as continuously improving company's operations. The goal is for all organizations to seek continuous performance improvement. Quality management of the product or service includes a quality planning requirement along with policies, objectives and quantifiable targets. Quality Management System establishes and streamlines processes through complete documentation, improves and establishes training processes defines roles and responsibilities, increases operational efficiency. QMS also develops and builds relationships that help to retain existing customers; it improves customer relations; it ensures carefully planned improvements, based on documentation and analysis and provides for regular audits/reviews of performance (Chris, 2009, Chong 2006, Feigenbaum 1961, Nanda, 2005).

Kenya Port Authority also known as Mombasa Old Port by its old name is situated on the North side of Mombasa Island. The Port became famous during the spice trade between East Coast of Africa, the Indian Peninsula, the Arabian Gulf and the Far East ([www.kpa.co.ke](http://www.kpa.co.ke)). The development of the modern Port facilities was therefore started at the Kilindini Harbour in 1896. Kenya Ports Authority (KPA) was established by an Act of Parliament (CAP 391 of the Laws of Kenya) with the mandate to maintain, operate, improve and regulate all scheduled seaports situated along Kenya's coastline. The Authority's scope on quality management system covers activities on marine services, cargo handling services and short-term warehousing in Mombasa, Nairobi and Kisumu. Other offices include Kampala-Uganda (Liaison office) and Lamu. (KPA Handbook, 2012-13).

KPA's (The Quality Manual) QMS describes methods by which it complies with the ISO 9001:2008 Quality Management System requirements. KPA's Quality Management System, as outlined in this Quality Manual combines a management structure with a defined set of processes and procedures to ensure that customers' requirements are met. The Authority has established, documented, implemented and maintained a quality management system that continually improves its effectiveness in accordance with the requirements of ISO 9001:2008 comprising of;

- a) Identification of the processes needed for Quality Management System and their applications throughout the Authority.

- b) Detailed process maps that determine the sequence and interaction of these processes
- c) Documented QMS Manuals that determine the criteria and methods needed to ensure that both the operation and control of these processes are effective.
- d) Monitoring, measuring and analyzing of these processes according to the respective functional unit's established criteria.
- e) Implementing actions necessary to achieve planned results and continually improvement of these processes by the respective functional units.

The Authority determines, collects and analyzes appropriate data to demonstrate the suitability and effectiveness of the QMS and to evaluate where continual improvement of the effectiveness of the QMS can be made (KPA Handbook, 2013-14).

## II. LITERATURE REVIEW

### Theories in TQMS

#### 1. Deming's Theory

According to Bowen R (2013) Deming's theory of Total Quality Management rests upon fourteen points of management, the system of profound knowledge, and the Shewart Cycle (Plan-Do-Check-Act). Quality is equal to the result of work efforts over the total costs. If a company is to focus on costs, the problem is that costs rise while quality deteriorates. Deming's system of profound knowledge consists of the System Appreciation – an understanding of the way that the company's processes and systems work, Variation Knowledge – an understanding of the variation occurring and the causes of the variation, Knowledge Theory – the understanding of what can be known, and Psychology Knowledge – the understanding of human nature

By being aware of the different types of knowledge associated with an organization, then quality can be broached as a topic. Quality involves tweaking processes using knowledge. The fourteen points of Deming's theory of total quality management are; Create constancy of purpose, Adopt the new philosophy, Stop dependencies on mass inspections, Don't award business based upon the price, Aim for continuous production and service improvement, Bring in cutting-edge on the job training, Implement cutting-edge methods for leadership, Abolish fear from the company, Deconstruct departmental barriers, Get rid of quantity-based work goals, Get rid of quotas and standards, Support pride of craftsmanship, Ensure everyone is trained and educated and Make sure the top management structure supports the previous thirteen points (Chris, 2009, Aguayo, *et al*, 1990, Goetsch, *et al*, 2013)).

#### 2. Joseph Juran's Theory

Joseph Juran is responsible for what has become known as the "Quality Trilogy." The quality trilogy is made up of quality planning, quality improvement, and quality control. If a quality improvement project is to be successful, then all quality improvement actions must be carefully planned out and controlled. Juran believed there were ten steps to quality improvement. These steps are: An awareness of the opportunities and needs for improvement must be created, Improvement goals

must be determined, Organization is required for reaching the goals, Training needs to be provided, Initialize projects, Monitor progress, Recognize performance, Report on results and track achievement of improvements (Joseph Juran, 2009).

#### 3. The EFQM Framework

The European Foundation for Quality Management (EFQM) Model is based upon nine criteria for quality management. There are five enablers (criteria covering the basis of what a company does) and four results (criteria covering what a company achieves). The result is a model that refrains from prescribing any one methodology, but rather recognizes the diversity in quality management methodologies. The nine criteria as defined by the EFQM Model are: Focus on Results – pleasing company stakeholders with results achieved by stakeholders is a primary focus, Focus on Customers – it is vital that a company's quality management leads to customer satisfaction, Constancy of Purpose and Consistent, Visionary Leadership, Process and Facts form the Management Focus – Management breaks down everything into systems, processes and facts for easy monitoring, Training and Involving Employees – Employees should receive professional development opportunities and be encouraged to remain involved in the company. Continuous Learning – everyone should be provided with opportunities for learning on the job, Developing Partnerships – It is important to encourage partnerships that add value to the company's improvement process. Social Responsibility of the Corporation – The company should always act in a way where it is responsible towards the environment and society at large (James and Williams, 2008, Goetsch, *et al*, 2013)

#### Other Related Works

##### 1. Organizational Culture

Daft (2004), defines culture as a set of values, norms, guiding beliefs and understandings that is shared by members of an organization and is taught to new members. Everyone participates in culture, but culture generally goes unnoticed. It is only when organizations try to implement new strategies or programs that go against basic cultural norms and values that they come face to face with the power of culture (Goetsch, *et al*, 2013 Etienne-Hamilton, 1994).

According to Huczynski, A. and Buchanan, D. (2013) Goetsch, *et al*, (2013) culture is the collection of relatively uniform and enduring values, beliefs, customs, traditions and practices that are shared by an organization's members, learned by new recruits and transmitted from one generation of employees to the next. Culture provides members with a sense of organizational identity and generates in them a commitment to beliefs and values that are larger than themselves. Cultures serve two critical functions in an organization i.e. to integrate members so that they know how to relate to one another and to help the organization adapt to the external environment

##### 2. Employee Involvement

People at all levels are the essence of an organization and their full involvement enables their abilities to be used for the organization's benefit. Involving people and their abilities at all levels can only bring benefit to the organization. Motivating people, holding them accountable for their own performance and involving them in decision making inspires innovation and creativity. Employee involvement approaches can range from simple sharing of information or providing input on work-related

issues and making suggestions to self-directed responsibilities such as setting goals, making business decisions and solving problems, often in cross-functional teams (James and Williams,

2008, Goetsch, *et al*, 2013).. The continuum of employee involvement approaches is summarized in the table 1 below.

**Table 1. Levels of employee involvement**

<b>Level</b>	<b>Action</b>	<b>Primary outcome</b>
Information sharing	Managers decide, then inform employees	Conformance
Dialogue	Managers get employees input, then decide	Acceptance
Special problem solving	Managers assign a one-time problem to selected employees	Contribution
Intragroup problem solving	Intact groups meet weekly to solve local problems	Commitment
Intergroup problem solving	Cross-functional groups meet to solve mutual problems	Cooperation
Focused problem solving	Intact group deepen daily involvement in a specific issue	Concentration
Limited self-direction	Teams at selected sites function full time with minimum supervision	Accountability
Total self-direction	Executives facilitate self-management in an all-team company	Ownership

**Source:** James and William (2008).

### 3. Management Commitment

Top Management in organizations maintains the leadership responsibility for the quality management systems, with involvement of all organizational staffs. This responsibility includes; ensuring the availability of resources to all staff to ensure improved service delivery is achieved for the realization of the organization’s vision and mission. Establishing and reviewing the quality policy and quality objectives quarterly to ensure compliance to the quality standards (Cane, Sheila 1996 Soltani, 2005, Ali and Abedalfattah 2012).

Leaders should provide a clear vision of the organization’s future and set challenging goals and targets. It is only through unity of purpose and direction of employees that achieves organization’s objectives. Leader should maintain internal environment where people can get fully involved by establishing trust and eliminating fear. (Cole & Phil 2011) defines leadership as the process of influencing others to understand and agree about what needs to be done and how to do it, and the process of facilitating individual and collective efforts to accomplish shared objectives.

### 4. Customer Focus

It is essential for an organization to understand current and future customer needs. It should strive to meet customer requirements and exceed customer expectations. This could be done by communication throughout the organization, measuring customer satisfaction and systematically managing customer relationships. Ensuring a balanced approach and acting on findings is vital. Organizations depend on their customers and therefore should understand current and future customer needs, should meet customer requirements and strive to exceed customer expectations. Customer focus is a key requirement of ISO 9000:2000. For example, in the Management Responsibility section, one requirement is “Top management shall ensure customer requirements are determined and are met with the aim of enhancing customer satisfaction”. This puts the responsibility

for customer focus on senior management (Evans and Lindsay 2008, Crosby 1979).

For business enterprises, the significant driving force to establish the quality goals basically originates from customer needs. Generally speaking, customer needs identify the operational goals for firms to meet. And this type of quality goals is also referred as market-driven (Juran, 1992). Aaker, *et al*, 2007 mentioned that quality started with the understanding of customer needs and ended when those needs were satisfied. In order to meet the requirement of customers, top management should clarify the expectations of its customers.

Further, organizational strategy should also be developed based on customers’ needs Etienne-Hamilton (1994). Kumar and Balakrishnan (2011) pointed out that customer focus is the underpinning principles for firms to implement TQM programs. Since senior management may have the influence and authority to dominate the entire TQM implementation, dedicated commitment from top management about implementing TQM is certainly a necessity.

## III. RESEARCH DESIGN

The research adopted a descriptive study design. Data was typically collected through questionnaire, and interview. It embraced a large proportion of the market research and provided a snapshot of some aspect of the market environment. (Gay, 1981 , Mugenda, *et al*, 1999, Dawson, 2002). The research employed a sample size of 116 respondents. This was arrived at after using ten (10%) of each stratum obtained from all departments. The actual respondents were selected randomly from each population sub-group as indicated in Table 2 below.

**Table 2: Sample Frame and Sample Size.**

Department	Sample Frame	Sample Size	Percentage of total sample (%)
Procurement	120	12	10.34%
Information Technology	90	9	7.76%
Medical	130	13	11.21%
Marine Operations	220	22	18.97%
Marine Engineering	250	25	21.55%
Civil Engineering	240	24	20.69%
Internal Audit	50	5	4.31%
Ethics & Integrity	60	6	5.17%
<b>Total</b>	<b>1,132</b>	<b>116</b>	<b>100.00%</b>

Source: Researcher (2014)

#### IV. RESEARCH FINDINGS AND DISCUSSIONS

##### 4.1 Results and Discussion

In the study, a total of 116 questionnaires were distributed of which 74 were successfully filled, returned and taken as valid samples.

**Table 3: Response rate**

Questionnaires issued	Returned	% return rate
<b>116</b>	<b>74</b>	<b>64%</b>

According to Mugenda and Mugenda (1999) a 50% response rate is adequate, 60% good and above 70% rated very good. This implies that basing on this assertion; the response rate in this case

of 60% was good. It is therefore apparent that the respondents were willing and could freely share the required information on KPA's Quality Management Systems.

**Table 4: Gender response to effects of Quality Management Systems in KPA**

		Frequency	Percent	Valid Percent	Cum. Percent
Valid	MALE	47	63.5	63.5	63.5
	FEMALE	27	36.5	36.5	100.0
Total		74	100.0	100.0	

The finding from the table 4 above indicates that the majority of the respondents were male with 63.5% of the response while the female contribution was 36.5% of the total valid sample size. This is a clear indication that male staffs were more active in the exercise than their female counterpart. It also

emerged that females were not ready to respond to various questions resulting to their low returns. This was an evident that the females were not fully involved in the quality management systems in the enhancement of performance in KPA.

##### 4.1.1 The Commitment of management to QMS

**Table 5: Descriptive Statistics on Commitment of Management to QMS in the performance of Kenya Ports Authority**

	N	Min	Max	Mean	Std. Deviation
Provision of quality service to its stakeholders	74	1	2	1.26	.440
Creating and sustaining, clear visions, goals, targets and shared values	74	1	2	1.22	.414
Management ensures control through the establishment	74	1	3	1.62	.590

of benchmarks, standards and feedbacks					
Workshops on importance of quality management conducted periodically	74	1	3	1.59	.571
There is necessary achievement of results through action plans and projects	74	1	4	2.49	.745
Valid N (listwise)	74				

Findings in table 5 above shows the statistics on commitment of management to Quality Management Systems in Kenya Ports Authority as it indicates a mean of 1 to 2.5 which is between strongly agree and agree that the management is committed. This data also implies that standard deviation (0.4 – 0.7) on management commitment to QMS is positively skewed on the normal distribution curve thus not widely distributed. It is therefore evidence that the KPA Management is committed to QMS in the organization. The respondents were in total agreement to the creation and sustaining clear vision, goals, targets and shared values in ensuring commitment to quality is

achieved where a mean of 1.22 respondents were between (1 – 2) strongly agreed and agreed as per Likert scale respectively in enhancing quality performance in the organization.

It is therefore evident that the Authority’s Management is firmly committed to the development and implementation of the Quality Management System through; provision of quality service to its stakeholders, creating & sustaining, clear visions, goals, targets and shared values, establishment of benchmarks, standards & feedbacks and conducting regular management reviews as per the documented procedures.

**Table 5.1: Correlations between Provision of Quality Service to its Stakeholders and Creating & sustaining, clear visions, goals, targets and shared values**

		Provision of quality service to its stakeholders	Creating & sustaining, clear visions, goals, shared values
Provision of quality service to its stakeholders	Pearson Correlation	1	.894**
	Sig. (2-tailed)		.000
	N	74	74
Creating and sustaining, clear visions, goals, targets and shared values	Pearson Correlation	.894**	1
	Sig. (2-tailed)	.000	
	N	74	74

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

The analysis shows a correlation coefficient of 0.894 and a significance of 0.000. The significance is <0.05 and indicates that there is strong linear relation between provision of quality

services to creation of clear vision, goals, targets and shared values in the organization.

**Table 5.2: Correlations between Necessity to achieve results by action plans and periodical workshops on quality management systems.**

		Workshops on importance of quality management conducted periodically	There is necessary achievement of results by action plans and projects
Workshops on importance of quality management conducted periodically	Pearson Correlation	1	.965**
	Sig. (2-tailed)		.000
	N	74	74
There is necessary achievement of results through action plans and projects	Pearson Correlation	.965**	1
	Sig. (2-tailed)	.000	
	N	74	74

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

The analysis shows a correlation coefficient of 0.965 and a significance of 0.000. The significance is <0.05 and indicates that there is strong linear relation between necessity to achieve results

by action plans and periodical workshops on quality management systems in the organization.

**Table 5.3: Periodical Workshops on Quality Management and Control through benchmarks, standards and feedbacks**

	Management's control by establishment of benchmarks	Workshops on quality management
Management's control by establishment of benchmarks	Pearson Correlation 1 Sig. (2-tailed) N 74	.920** .000 74
Workshops on quality management	Pearson Correlation .920** Sig. (2-tailed) N 74	1 .000 74

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

The analysis shows a correlation coefficient of 0.920 and a significance of 0.000. The significance is <0.05 and indicates that there is strong linear relation between periodical workshops on

quality management and control through benchmarks, standards and feedbacks in the organization.

#### 4.1.2 Employees' involvement to QMS

**Table 6: Descriptive statistic on employees' involvement**

	N	Min	Max	Mean
Employees are fully involved in the organization's quality management decision making processes	74	2	5	2.91
Employees are well trained on integration and appropriate use of statistical tools and problem solving methods	74	2	5	3.81
Does staff establish quality improvement teams, corrective action teams and suggestion schemes	74	1	4	2.09
Empowerment of employees by delegating authority to make decisions regarding process improvement within individual areas of responsibility.	74	1	5	2.09
Valid N (list wise)	74			

Majority of the staff represented by 58.1% percent reveals that KPA management does not fully involve employees in quality management decision making process with 1.4% percent strongly disagreeing with management in involving them. This is represented by a mean score of 2.91 as per table 6 above. Some respondents said they are only involved in implementation of the decisions made thus leaving them with no room to share their views on how to better the QMS in the organization. Table 6.1 illustrates the outcome. Only 40.5% agree that they are well trained on integration and appropriate use of statistical tools and problem solving methods, 29.7% are not sure while 28.4% disagree with 1.4% strongly disagreeing. From the respondents sampled, it was clear that the management was selective on nomination of personnel for training and this affects performance of the organization negatively.

Table 6 above shows that there were some positive responses from respondents with a mean of 2.09 of the valid results

showing that staffs establish quality improvement teams, corrective action teams and suggestion schemes which enhance performance of Kenya Ports Authority. 24.3% and 44.6% strongly agreed and agreed respectively that they do establish teams for enhancing performance. 28.4% were not sure while 2.7% disagreed with the point as illustrated in table 6.3 below.

A representation of 70% of the respondents reveals that the Kenya Ports Authority management empowers and encourages delegation of duties and ensure proper decisions regarding process improvement within individual areas of responsibility are made. 24.3% strongly agreeing and 48.6% agree, 21.6% were not sure of delegated duties to them while 4.1% and 1.4% disagreed and strongly disagreed respectively on empowering and delegation of duties within the organization as shown in table 6.4 below.

**Table 6.1 Employees are fully involved in the organization’s quality management decision making processes**

		Frequency	Percent	Valid Percent	Cum Percent
Valid	agree	30	40.5	40.5	40.5
	not sure	22	29.7	29.7	70.3
	disagree	21	28.4	28.4	98.6
	strongly disagree	1	1.4	1.4	100.0
Total		74	100.0	100.0	

**Table 6.2: Employees are well trained on integration and appropriate use of statistical tools and problem solving methods**

		Frequency	Percent	Valid Percent	Cum Percent
Valid	agree	11	14.9	14.9	14.9
	not sure	14	18.9	18.9	33.8
	disagree	27	36.5	36.5	70.3
	strongly disagree	22	29.7	29.7	100.0
Total		74	100.0	100.0	

**Table 6.3: Establishment of quality improvement teams, corrective action teams and suggestion schemes**

		Frequency	Percent	Valid Percent	Cum Percent
Valid	strongly agree	18	24.3	24.3	24.3
	agree	33	44.6	44.6	68.9
	not sure	21	28.4	28.4	97.3
	disagree	2	2.7	2.7	100.0
	Total	74	100.0	100.0	

**Table 6.4: Empowerment of employees by delegating authority to make decisions regarding process improvement within individual areas of responsibility**

		Frequency	Percent	Valid Percent	Cum. Percent
Valid	strongly agree	18	24.3	24.3	24.3
	agree	36	48.6	48.6	73.0
	not sure	16	21.6	21.6	94.6
	disagree	3	4.1	4.1	98.6
	strongly disagree	1	1.4	1.4	100.0
Total		74	100.0	100.0	

The top management’s role is to provide the environment where people are empowered to realize the organization’s objectives. Top management needs to establish the quality policy, ensure the quality objectives are established at relevant functions and levels in the organization, communicates to all employees on the importance of meeting customer as well as stator and regulatory requirements, conduct management reviews and ensure the availability of resources.

Involving employees, empowering them, and bringing them into decision making process provides the opportunity for continuous process improvement. The untapped ideas, innovations, and creative thoughts of employees can make the difference between success and failure. Competition is so fierce that it would be unwise not use every available tool.

**4.1.3 Cultural behavior in enhancing quality and productivity**

**Table 7: Descriptive statistics on Cultural behavior in enhancing quality**

	N	Min	Max	Mean
Enlightened on cultural values that enhance organization’s performance	74	1	3	1.74
In place, a central core values into which management and other employees follow	74	1	3	2.19
Teamwork encouraged by management	74	1	3	2.01

Understanding of the organizational mission, your part in it and what has to be done to achieve it	74	1	4	2.27
Proper safety gears provided for employees protection	74	1	2	1.50
Valid N (list wise)	74			

The mean of 1.74, in table 7 above, implies that cultural values that enhance organizational performance are enlightened within KPA employees. A 39.2% of respondents strongly agreed while 47.3% of the respondents agreed that organizational culture enhance performance, table 7.1 below illustrates. With respondents ranging between 1-3 in the given scale (Likert), table 7 above, it is evident that organization has central core values into which management and other employees follow. This implies all employees have a role in enhancing quality through the centralized core values. 9.5% and 62.2% strongly agreed and agreed respectively on the central core values. Only 28% were not sure as indicated in table 7.2 below.

As reflected from the findings, 17.6% and 63.5% strongly agreed and agreed respectively that teamwork was encouraged in the performance of activities in the organization as can be seen in the table 7.3 below. Around 74.4% of the respondents were positive on the understanding of the organizational mission, their part in it and what they need to do to achieve the goals. 20.3% were not sure while 7.4% disagreed on understanding of the organizational mission, their part in it and what they need to do in achieving the organizational goals. Table 7.4 below illustrates the results. According to table 7.5 below, the respondents were positive on provision of proper safety gears at their workplaces. 50% - 50% of the respondent strongly agreed – agreed on safety gears being provided.

**Table 7.1: Enlightened on cultural values that enhance organization’s performance**

		Frequency	Percent	Valid Percent	Cum. Percent
Valid	strongly agree	29	39.2	39.2	39.2
	agree	35	47.3	47.3	86.5
	not sure	10	13.5	13.5	100.0
	Total	74	100.0	100.0	

**Table 7.2: A central core values into which management and other employees follow**

		Frequency	Percent	Valid Percent	Cum. Percent
Valid	strongly agree	7	9.5	9.5	9.5
	agree	46	62.2	62.2	71.6
	not sure	21	28.4	28.4	100.0
	Total	74	100.0	100.0	

**Table 7.3: Teamwork encouraged by management**

		Frequency	Percent	Valid Percent	Cum. Percent
Valid	strongly agree	13	17.6	17.6	17.6
	agree	47	63.5	63.5	81.1
	not sure	14	18.9	18.9	100.0
	Total	74	100.0	100.0	

**Table 7.4: Understanding of the organizational mission, your part in it and what has to be done to achieve it**

		Frequency	Percent	Valid Percent	Cum. Percent
Valid	strongly agree	3	4.1	4.1	4.1
	agree	52	70.3	70.3	74.3
	not sure	15	20.3	20.3	94.6
	disagree	4	5.4	5.4	100.0
	Total	74	100.0	100.0	

**Table 7.5: Proper safety gears provided for employees protection**

		Frequency	Percent	Valid Percent	Cum. Percent
Valid	strongly agree	37	50.0	50.0	50.0
	agree	37	50.0	50.0	100.0
	Total	74	100.0	100.0	

The Authority has ensured the cultural norms are measured by things like as amount of work done and also the level of cooperation between management and employees of the organization. Clearly rules are defined for employee’s behavior associated to the productivity, intergroup cooperation and customer relationship. Observed behavioral regularities, as

illustrate common language and formal procedures in encouraging teamwork at all times. Coordination and integration between the organizational units for the purpose of improvement in efficiency to works, quality and speed of designing, services by understanding organizational mission and objectives.

**4.1.4 Customer focus and satisfaction**

**Table 8: Descriptive statistics on Customer focus and satisfaction to performance**

	<b>N</b>	<b>Min</b>	<b>Max</b>	<b>Mean</b>
Organization establishes and understand current and future customer needs	74	1	3	1.45
Organization ensures that it communicates and balances the needs and expectations of all interested parties	74	1	2	1.47
Management measure customer satisfaction and rectifies where necessary	74	1	2	1.47
Management responses to customers' complaints	74	1	2	1.38
Are you satisfied with the level of service delivery to customer	74	1	5	1.62
Valid N (list wise)	74			

The findings imply that Kenya Ports Authority is customer oriented and that it practices quality management by complying with products conformity. This is evident from table 8above, where the mean score ranges between 1.38 to 1.6 which shows that customer focus is one of the pillars in the Authority’s performance. Most respondents are agreeable with the current trend in the organization as they are aware of their customer needs as shown in table 8.1 below with 98.6% positive results. The respondents, through the scale, 56.8% strongly agreed and 47.3% agreed that communication is also an area which the organization has given weight in line with ensuring that the organization communicates and balances the needs and expectations of all stakeholders as shown in table 8.2 below.

It was noted from the respondents that the management has the mechanism in place to measure their customer satisfaction and correct areas which have some non-conformities. A sample

of 52.7% strongly agreed that the management measures customer satisfaction and rectifies where necessary while 47.3% agreed, leaving no room for other views as it all accumulated to 100% of the respondents. Table 8.3 evidently shows the findings.

The valid 74 respondents of the 116 that returned their questionnaires confirmed that the response rate of the management to customer complaints was positive and that it is one way of ensuring that a customer is maintained at all costs. Table 8.4 illustrates the managements concern to their customers’ needs. It however emerged that 9.5% of the respondents were not satisfied with the level of service delivery to their customers. Table 8.5 shows that 6 respondents were not sure while 1 respondent strongly disagreed with the service delivery level to their customers.

**Table 8.1: Organization establishes and understands current and future customer needs**

		<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>	<b>Cum. Percent</b>
Valid	strongly agree	42	56.8	56.8	56.8
	agree	31	41.9	41.9	98.6
	not sure	1	1.4	1.4	100.0
	Total	74	100.0	100.0	

**Table 8.2: Organization ensures that it communicates and balances the needs and expectations of all interested parties**

		<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>	<b>Cum. Percent</b>
Valid	strongly agree	39	52.7	52.7	52.7
	agree	35	47.3	47.3	100.0
	Total	74	100.0	100.0	

**Table 8.3: Management measure customer satisfaction and rectifies where necessary**

		Frequency	Percent	Valid Percent	Cum. Percent
Valid	strongly agree	39	52.7	52.7	52.7
	agree	35	47.3	47.3	100.0
Total		74	100.0	100.0	

**Table 8.4: Management responses to customers' complaints**

		Frequency	Percent	Valid Percent	Cum. Percent
Valid	strongly agree	46	62.2	62.2	62.2
	agree	28	37.8	37.8	100.0
Total		74	100.0	100.0	

**Table 8.5: Are you satisfied with the level of service delivery to customer?**

		Frequency	Percent	Valid Percent	Cum. Percent
Valid	strongly agree	37	50.0	50.0	50.0
	agree	30	40.5	40.5	90.5
	not sure	6	8.1	8.1	98.6
	strongly disagree	1	1.4	1.4	100.0
Total		74	100.0	100.0	

The organization regards customer requirements and satisfaction as an important aspect of its business operations. Organization ensures that it communicates and balances the needs and expectations of all interested parties. Customer focus is seen as a key performance indicator within business and is often

part of a Balanced Scorecard. In a competitive marketplace where businesses compete for customers, customer satisfaction is seen as a key differentiator and increasingly has become a key element of business strategy.

**4.1.5 Processes and procedure measurement**

**Table 9: Descriptive statistics on process and procedure measurement**

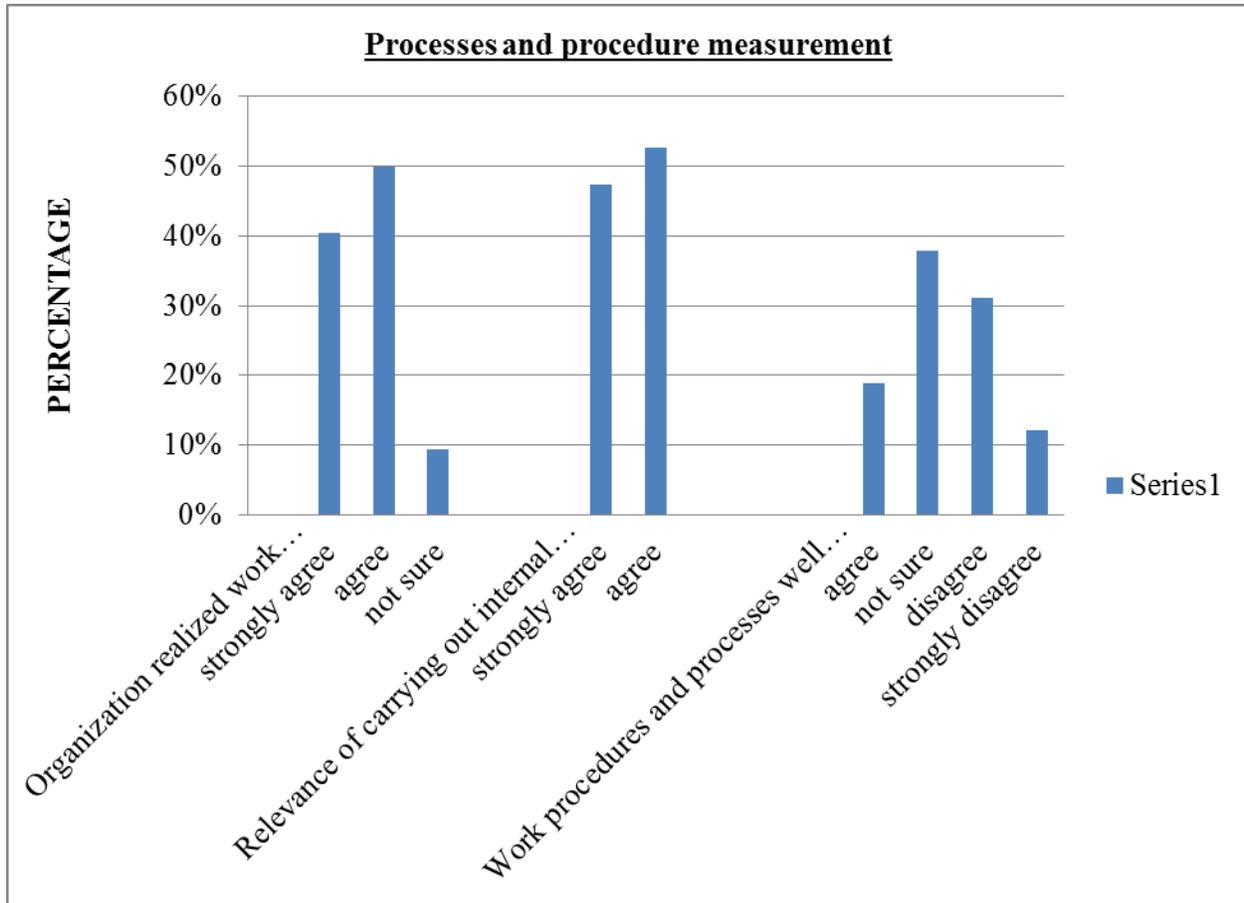
	N	Min	Max	Mean
Organization realized work improvement since inception of ISO	74	1	3	1.69
Relevance of carrying out internal audits	74	1	2	1.53
Work procedures and processes well documented and followed	74	2	5	3.36
Valid N (list wise)	74			

In the findings, most of the respondents were of the opinion that since inception of ISO in the organization, work improvement have been realised with a 40.5% strongly agreeing and 50% agreed. Only 9.5% were not sure and did not comment anything as prefigure 2 below.

work procedures were being followed in enhancing quality performance as illustrated in figure 2 below, with 47.3% strongly agreeing to the relevance of audits and 52.7 agreeing to the same. Therefore a positive finding was registered with a mean of 1.53 as shown in table 9 above.

The respondent were also in agreement that carrying out quality audits periodically was relevant in checking whether

**Figure 2: Processes and procedure measurement**



The Authority is seen having established and maintained relevant procedures for inspecting all process inputs to ensure that both the customer's and the Authority's requirements for the product and services are met.

**V. SUMMARY OF MAJOR FINDINGS**

Major findings indicate that the management has positively embraced quality initiatives in the organization by ensuring that the entire KPA staffs are aware of the importance of quality performance in enhancing achievements at all levels. The findings of this study results revealed that commitment of management to QMS in the performance of KPA was through provision of quality services to KPA stakeholders, creating and sustaining clear vision, goals targets and shared values which was posted as positive with a mean=1.69.

It was also noted that the managements' commitment ensured control through establishment of benchmarks, standards and feedbacks on activities being undertaken as all was geared towards achieving quality performance in KPA (mean=1.74). Workshops on QMS were positively conducted resulting into a mean of 2.05. It was also clear that the commitment of management ensured the necessity of result achievement through action plans and projects. Generally it was noted that commitment of management strongly affects performance positively through QMS. Employees' involvement to QMS in the

performance of Kenya Ports Authority was seen to be on the negative as they were not fully involved in decision making processes thus erstwhile ideas were not given to the management for inclusion in the decision making. Cultural behavior in enhancing quality and productivity on performance of Kenya Ports Authority. Training was also not given priority as a mean score of 3.81 shows little or few individuals were given the opportunity to train on statistical tools and problem solving methods.

According to the statistics, customer focus was found to be a focal point where the management and employees were required to strive in achieving quality results that satisfy the needs of their customers. It is seen through the response rate (mean=1.47) that communication is an area viewed with much concern that it ensures customers' expectations are attended to with utmost urgency. The management has also put in place mechanism of ensuring they measure their customer satisfaction through feedback reports. The statistics also shows that the managements' response rate to customer complaints is high to avoid losing customers to competitors.

The processes and procedure measurement to effective performance of Kenya Ports Authority has shown a major milestone since implementation of ISO in the organization has improved work since its inception, (mean=1.69), the staff confirmed importance of carrying out internal audits periodically

as it ensures the employees follow the procedures required in enhancing quality performance.

KPA establishes and understand current and future customer needs to a mean score of 1.45, it also balances the needs and expectations of all interested stakeholders to a mean score of 1.47, measures customer satisfaction and rectifies where necessary to a mean score of 1.47 and respond to customer complains to a mean score of 1.38. This implies that KPA needs to put more effort to ensure customer satisfaction since customers are the determinants of success or failure of a business.

The research findings imply that the major challenge in KPA's implementation of QMS is cascading the program to the bottom of the pyramid. Management should ensure training on integration and appropriate use of statistical tools and problem solving methods be done to all employees without choosing their various levels in the organizational hierarchy. Workshops on quality awareness to all staff levels should ensure coverage of both staff working on shift and those on normal working hours to avoid managing teams that cannot integrate easily in enhancing performance. Efforts should be done to mitigate the above challenges for successful implementation of Quality Management Systems in KPA.

## VI. CONCLUSIONS

Quality management systems in any organization are a crucial factor in efficient and effective leadership for successful functioning of any organization.

1. The study finding concludes that effective management leads to improved performance, there is need to put more emphasis on all quality services or products to ensure more organization business performance, tools in process approach need to be fully employed in enhancing quality services in KPA.
2. There is also need to focus more on already established factors like management response to customer' complaints, service delivery to customers and organization communication and balancing the needs and expectation of interested parties which have an impact on customer satisfaction.
3. Personnel training on issues that directly affect performance of the organization is seen as a grey area as most employees are not satisfied with the mode of selection for training, citing that specific individuals could be chosen to undertake various courses while the Authority has other potential staff with same training requirements.
4. Most employees maintain that the organization should understand the current and future needs of customers; they also agree that business performance and customer satisfaction are enhanced by quality management practices.
5. The study findings also infer that use of process approach in defining the activities necessary to achieve desired results, evaluating risks, consequences and impacts of activities on

customers and other stakeholders have a major impact on performance at KPA.

6. Analyzing and measuring of the capabilities of key activities can also have a major impact on organization performance.
7. The findings further established that quality, customer satisfaction, maintaining the effectiveness of quality management system and compliance with customer and regulatory requirements are the personal responsibility of every employee.
8. Maintaining the results of the review, and any subsequent follow-up actions. Auditing is seen as a guide to ensure QMS adhered to and regular checks provides the employees with the confidence on the required standards that ensure product/service delivery and conformity to the requirements thus continual improvement.

## VII. RECOMMENDATIONS

1. The study recommends that emphasis should be put on the incorporation of all the principles of Quality Management Systems for successful quality performance for the success of the organization.
2. The role of management commitment, employee involvement, organizational culture and customer focus are apparent for the success of the organization in terms of market share, productivity, profitability and overall business performance.
3. Improved quality performance has positive effects on overall business achievements.
4. Improving on quality series or products to satisfy customer's needs does pay off since the benefits accrued include; improved quality, employee satisfaction, productivity, employee participation, teamwork, communication, profitability and market share.
5. The study recommends that firm should establish their quality management systems according to the requirement of ISO standards effectively for effective equality services and for the success of the firm.
6. Flexibility of the organizational culture will determine the success or failure of achieving quality services or products.
7. Resistance to change, lack of commitment, cascading the program to the bottom of the pyramid are some of the challenges faced in management of quality systems in an organization.
8. The study recommends that firms should be flexible enough when implementing quality standards and management should develop a quality culture by changing perception and attitudes towards quality.
9. Organization inflexibility and inertia has provided an environment that weakened and erodes the foundation of quality.

## Areas for Further Research

Further research can be performed to expand research scope to different industries or investigate the implementation situation in public and private companies and also in small- and medium-size companies. Moreover, quality management can integrate firm's internal and external processes with knowledge creation processes. Thus, future researches can be performed to consider integrating the relationship, studying the synergies between Quality Management Systems practices and measuring how economic effects of workforce can enhance performance on added firm's value.

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