INTERNATIONAL JOURNAL OF
SCIENCE ARTS AND COMMERCE

EFFECT OF SERVICE QUALITY MANAGEMENT PRACTICES ON OPERATIONAL PERFORMANCE OF PETROLEUM DISTRIBUTING FIRMS IN KENYA

Munyao S.Moses*
Odock Stephen Achieng,PhD**
Kingsford Rucha***
*PhD Student, Management Science Department, University of Nairobi-Kenya
**Lecturer; Department of Management Science, University of Nairobi-Kenya
**Lecturer; Department of Management Science, University of Nairobi-Kenya

ABSTRACT
The desire of any service organization is deliver quality service that meets their customer expectations so as to remain profitable and in business. The service market has now become more competitive than ever before and meeting customer needs is a necessity. Petroleum distributing firms in Kenya are at a great task of perfecting their service delivery systems to ensure that their customers get quality product at the right time, right quantity and above all safely. Well managed service quality practices have the potential of transforming the operational performance of an organization. The objectives of the study were to determine the extent of adoption of service quality management practices by petroleum distributing firms in Kenya, the challenges they face in the implementation of these practices and the effect of these practices on the firms' operational performance. The study was carried out through a descriptive survey of 32 petroleum distributing firms in Kenya. Questionnaires were used to collect primary data. The collected data was analysed descriptive statistics while regression analysis technique was used to establish the relationship between the dependent and independent variables. The research findings

were presented in tables. The findings indicated that petroleum distributing firms adopted various service quality management practices to a large extent. The findings also indicated that lack of visionary leadership and top management support were the biggest challenges the firms faced in their endeavour to implement service quality management practices. Further, the relationship between the explored seven aspects of SQMP and operational performance was found to be weak due to the fact that some control variables like size of the firm and number of years in operation were not considered .The main conclusion was that the adoption of service quality management practices by petroleum distributing firms was inevitable. The researcher recommends that policy makers should ensure organizations embrace service quality management practices for improved productivity and better returns from their investments. The researcher concludes by suggesting that similar research be carried out in other sectors of the economy and a further study in the petroleum distributing firms that incorporate the control variables left out in this study.

Keywords: Service Quality, Operation Performance, Quality Management

INTRODUCTION

The demand for quality services as asserted by Githaguiand Ngugi (2013) is one of the most crucial areas that organisations need to pay attention in order to survive. Quality in a service organization is a measure of the extent to which a delivered service meets the customer's expectations. Delivering quality service means conforming to customer expectation in a consistent basis (Lewis &Booms, 1983).Service quality is considered a critical determinant of competitiveness that can help an organization to differentiate itself from other organizations and gain a competitive advantage. Superior service quality is a key to improved profitability and has been found to result in increased customer satisfaction, improved sales and profitability (Hasan& Kerr, 2003).

Petroleum is Kenya's major source of commercial energy and constitutes about 80% of the country's commercial energy requirements (Wanjiku, 2011). The petroleum industry is one of the prime movers in the country's vision 2030.Petroleum products do not have any close substitutes and this makes their prices to have a very significant impact on the level of inflation. The demand for petroleum products on average stands at 2.5 million tons per year and is on an increasing rising trend. According to Wahome (2006) statistics from PIEA, the demand for petroleum products is rising at an annual rate of 5.8 %. This means petroleum distributing firms should be more aggressive in their service delivery, which is the ability to deliver right volumes, right time and right quality at right location.

Parasuraman, Zenithamland Berry (1988) state that **service quality** is determined by the differences between customer's expectations of services provided and their evaluation of the services they receive. Gefen (2002)defines service quality as the subjective

comparison that customers make between the quality of the service that they want to receive and what they actually get. Bitner, Booms and Mohr (1994)define service quality as 'the consumer's overall impression of the relative inferiority / superiority of the organization and its services'. Service quality is an attitude related but not equivalent to satisfaction that results from comparisons of expectations and performance (Bolton & Drew, 1991). Thus, service quality can be defined as an assessment of how well a delivered service conforms to the client's expectations.

Service quality management is about ensuring customers, both internal and external, get what they want. By understanding what customers perceive as service quality, it will be easy for a company to ensure that it meets these expectations and even exceed them. According to Babakus (2004), service quality management entails the combined effect of service performances which determines the extent or the level of contentment and satisfaction of the service user. Thus, service quality management entails monitoring and maintenance of end-to-end services for specific clients or classes of clients. Parasuraman et al. (1988) concurs with Babakus (2004) by pointing out that service quality management involves meeting and exceeding the expectations of customers. It entails the assessment of how well a delivered service conforms to the client's expectations in order to improve the service, to quickly identify problems, and to better meet and hence customer satisfaction.

Service quality management practices (SQMP), refer to a set of management practices that are geared to the improvement of firm performance. These practices are top management support and commitment, employee's involvement, customer focus, employee training and development, quality information and product/service design (Jin, 2005). The adoption of SQMPenables an entity to put in place a framework that facilitates the delivery of goods and services to the expectation and requirements of the customer and in a better way than its competitors. This can position such an entity at competitive advantage over its competitors and hence better returns from its investments.

Operational performance of a firm is a measure against standard or prescribed indicators of productivity, capacity utilization, effectiveness, efficiency, cycle time, waste reduction and regulatory compliance. According to Johnston and Clark (2001) operational performance refers to measurable aspects of the outcomes of an organizations process such as reliability, production cycle time, and inventory turns.Terziovski, Fengand Samson (2007) define operational performance as performance related to an organizational internal operations such as productivity, product quality and customer satisfaction.Hasanand Kerr (2003) describe operational performance variables as productity and quality, scheduling and delivery. Measures of productivity and quality are productivity, efficiency, cost of quality and errors and defects. Measures of scheduling and delivery are lead time, timeliness of delivery and vendor relations.

Service quality management practices can affect the operational performance of a firm. The core values of service quality management according toAlemu, Helo, Takala

andFentahun(2011) represent how to encourage and motivate the employees to the best way to improve their capabilities, commitment and productivity. To meet and exceed customer expectations, firms must be effective and efficient in their service delivery. A timely delivery of defect or error free products enhances customer loyalty and goes a long way in retaining as well as attracting new customers.Satisfied customers will definitely increase their purchases and this translates to increased throughputs. Operational performance objectives like dependability, flexibility and reduced costs are key ingredients in defining an effective service quality management process.

The adoption of service quality management practices as indicated by Lakhal, PasinandLiman (2006) makes it possible for an entity to put in place a plan or a framework that enables it deliver goods as well as services that correspond to the needs and wants expressed by customers in a faster, better, safer, easier processing and cheaper way than the competitors through the participation of all an organisation's workforce and under the leadership of top management. A growing number of organizations make use of service quality management as a strategic foundation not only for improving firm performance but also as a mechanism for generating a competitive advantage.

The **petroleum industry** plays a very significant role in determining a number of economic variables in the country. Petroleum products do not have any close substitutes and this makes their prices to have a very significant impact on the level of inflation, the level of employment and poverty reduction within the Kenyan economy. Petroleum is Kenya's major source of commercial energy and constitutes about 80% of the country's commercial energy requirements (Wanjiku, 2011). According to Owino(2000) nearly 67% of Kenya's energy needs are provided by petroleum products and the country spends an average of 4% of the Gross Domestic product (GDP) in importation of petroleum products annually.

Kieyah (2011) indicates that the petroleum industry in Kenya comprises of a number of institutions that together form the current industry structure. The top most organs in the petroleum industry in the country is the Ministry of Energy that is charged with the responsibility of managing the energy resources in Kenya. The Government of Kenya has also established a number of state corporations that play a significant role in refining and distribution of petroleum products. The Kenya Petroleum refineries limited (KPRL) and Kenya Pipeline Corporation (KPC) are examples of such state corporations. There also exists a state corporation that is involved in the marketing of petroleum products, the Kenya National Oil Corporation (NOCK).

Petroleum industry in Kenya are the multinational and local petroleum marketing companies that avail petroleum products to the market. The various petroleum products include: Automotive Gas Oil (AGO), Premium Motor Spirit (PMS), Fuel Oil (FO), Dual Purpose Kerosene (DPK), Jet A1, Liquedified Petroleum Gas (LPG). The products are received from petroleum tankers from Shimanzi Oil Terminal (SOT), Kipevu Oil Terminal (KOT) into Kipevu Oil Storage Facility (KOSF), Kenya Petroleum Refineries

Limited (KPRL) and individual markers Terminals from where it is distributed into the hinterland.

One of the major challenges facing the petroleum industry in Kenya is the constantly increasing international crude oil prices that have impacted on the prices of locally sold petroleum products. According toOwino (2000), the Government of Kenya has made a number of steps towards eliminating on overdependence on foreign oil. This led to the commissioning of oil prospecting exercises in Kenya that have since been successful with oil finds in a number of locations in the Northern parts of the country. This discovery, though is a positive move towards self-reliant on petroleum products, is not complete without the implementation of service quality management practices (SQMP).

Petroleum distributing firms should have in place a SQMP framework that will ensure that these products are availed to the customer in the right quantity, quality, at the right time and in the right manner to the expectation and satisfaction of the customer. In addition, implementation of SQMP with the industry players ensures that effective guidelines and procedures are followed to mitigate increasing oil prices henceforth not exploiting consumers, and with the aid of the ERC, positive results will be achieved and challenges overlooked effectively.

1.2 Research Problem

According to Nilsson, Johnson andGustaffson(2001) service quality management has the potential of transforming the operational performance of an organization. They further argue that service quality is the degree to which a service meets key customer requirements. Customization and the level of reliability of the requirements are very important aspects of service quality management in organizations. Service quality is considered a critical determinant of competitiveness that can help an organization to differentiate itself from other organizations and gain a competitive advantage. The adoption of service quality management practices makes it possible for an entity to put in place a plan or a framework that enables it deliver goods as well as services that correspond to the needs and wants expressed by customers in a faster, better, and cheaper way than the competitors (Lakhal et al., 2006).

Petroleum is Kenya's major source of commercial energy and is mainly used in the transport, commercial and industrial sectors as well as for domestic purposes. Petroleum products are either imported as crude oil to be processed at the KPRL or in refined form for direct consumption. Petroleum product customers expect a distribution system that is reliable in transporting their products to their point of convenience without failure and served as per their expectations. Petroleum distributing firms should be willing and ready to help customers and provide prompt service and solve customer issues. They should have adequate petroleum products storage, loading and distribution facilities.

Studies on quality management have diverse views and findings. For instance, studies conducted by Jin (2005) on service quality management practices on customer satisfaction in Korean hotel industry established that there exists a direct relationship between SQMP and performance. A study by Sampio (2014) on the relationship between quality approaches and their impact on Portuguese companies'quality performance examined the positive relationships between TQM practices and performance measures and the selected indicators are productivity, conformance to customer requirements and product/service quality. Al-refaie, GhnaimatandKo (2011) examined on the effect of quality management practices on organisational performance in Jordan concluded that organisations that adopt a quality management strategy focus on achieving and sustaining high quality output using management practices as the inputs and quality performance as the outputs. Omollo (2011) carried out a study on the effect of service quality management on the financial performance of commercial banks in Kenya. The study revealed that service quality management was important in ensuring better financial performance.

A study by Doreen (2013) on service quality and operational performance in tour operators in Kenya found that despite significant level of implementation of various quality components, firms are still unable to attain high operational performance. A related study by Rachilo (2013) on internal service quality management and operational performance among commercial banks in Kenya, established that various service measures contributed to operational performance. These studies have not addressed service quality practices in relation to operational performance of petroleum distributing firms in Kenya. This leaves a research gap that needs to be addressed. This study sought therefore to bridge this gap by attempting to answer the following questions: To what extent have petroleum firms in Kenya adopted service quality management practices? What is the relationship between service quality management practice and operational performance of petroleum distribution firms in Kenya? And what are the challenges affecting implementation of SQMP by petroleum distributing firms in Kenya?

Research Objectives

The specific objectives were:

i. To determine the extent of adoption of service quality management practices by petroleum distributing firms in Kenya.

ii. To determine the challenges affecting implementation of service quality management practices by petroleum distributing firms in Kenya.

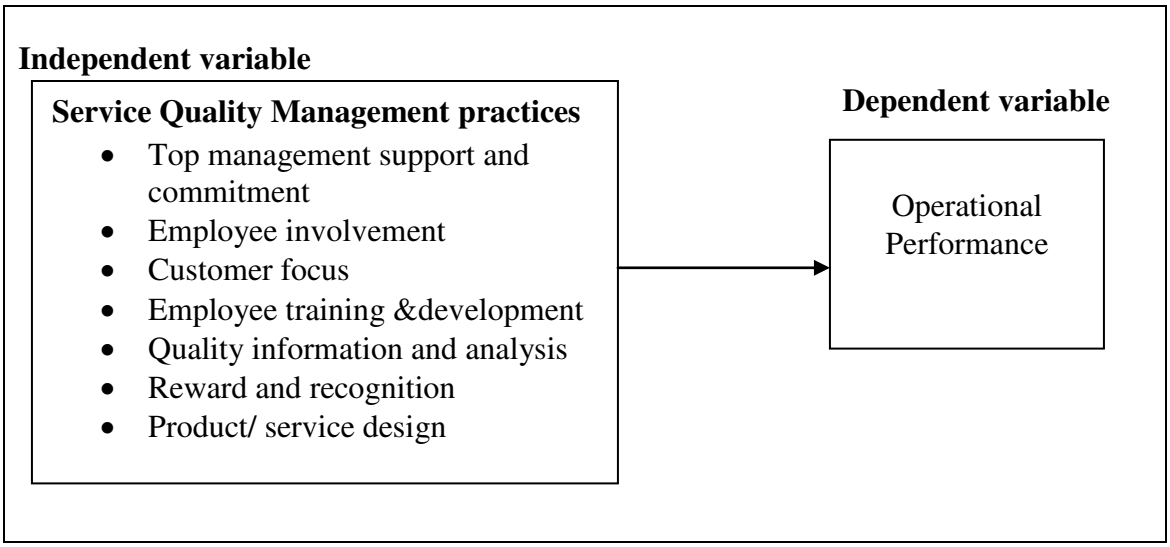
iii. To determine the relationship between service quality management practices and operational performance in petroleum distributing firms in Kenya.

LITERATURE REVIEW

The literature according to Chase & Bowen (1991) offers three alternative conceptualizations of service quality that is the attribute theory, the interaction theory and the customer satisfaction theory.

Literature provides three theoretical alternative conceptualizations of service quality namely the attribute theory, the interaction theory and the customer satisfaction theory (Chase & Bowen, 1991).The attribute theory assumes that service quality is a reflection of the attributes of the service delivery system and management has full control of the inputs defining these attributes. The customer satisfaction theory focuses more on the satisfaction of the needs and wants of the customers while the interaction theory delineates service quality as a gained experience that is shared by all involved parties or participates in the service encounter.

Figure1: Conceptual Framework



METHODS

The research was descriptive cross sectional survey of all petroleum distributing firms in Kenya. A single cross sectional design that involved a single round of data collection from the sample population was used to investigate associations between SQMP and operational performance. The design was appropriate for this study since it allowed the researcher to use both qualitative and quantitative data in trying to establish the service quality management practices on operational performance of petroleum distributing firms in Kenya.

The data was first checked for completeness, consistency and accuracy. It was then edited, coded and tabulated. The data was fed into a computer using the Statistical Package for Social Sciences (SPSS) for analysis. Descriptive statistics that is the mean

and the standard deviation were used to analyse data for the first and second objectives The following regression model was used:

$$\mathbf{Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + b_7X_7 + €}$$

Where:

Y = Operational performance index (Dependent variable).

a = Constant

$b_1, b_2, b_3, b_4, b_5, b_6$ and b_7 are the coefficients

X_1= Top management and commitment

X_2 = Employee Involvement

X_3 = Customer focus

X_4= Employee training and development

X_5= Quality information and analysis

X_6= Reward and recognition

X_7= Product/Service design

€ = Error term.

The multiple correlation coefficients R, was used to test the strength of the relationship between the independent variables and the dependent variable. The strength of the model was tested using R^2at 5% level of confidence so as to test the significance of the model in explaining the relationship between SQMP dimensions and operational performance of petroleum distributing firms.

RESULTS

The purpose of this study was to establish the effect of service quality management practices on operational performance of petroleum distributing firms in Kenya. Data was successfully collected from all the 32 targeted firms thus providing a response rate of 100%.

Duration in Business

The researcher sought to find out the numbers of years a petroleum distributing firm has been in operations in Kenya. The duration can determine the firms experience and resources it has for its operations. The findings are presented in **Table1**.

Table 1: Duration in Business

Duration (years)	Frequency	Percent
1 - 5	6	18.8
6 - 10	8	25.0
11 – 15	5	15.6
16 – 20	7	21.9
Above 20	6	18.8
Total	**32**	**100.0**

It is evident from the research findings in table 4.1 above that 25% of the petroleum firms have been in business for 6-10years; 21.9% of the firms have been in business for 16-20 years; 18.8% of the firms have been in business for 1-5 years and 11-15 respectively whereas 15.6% of the firms have been in business for 11-15 years. This is an indication that most of the firms have been in business for a relatively long duration hence were in a position to provide relevant information on service quality management and operational efficiency.

Service Quality Management Department

The researcher sought to find out whether a firm had a service quality management department. The existence of a service quality management department in firm can help in the implementation of service quality management practices. The study results are as presented in table 2.

Table 2: Existence of a Service Quality Management Department

Response	Frequency	Percent
Yes	18	56.3
No	14	43.8
Total	**32**	**100.0**

On the availability of a service quality department within the petroleum distributing firms in Kenya, the study results as shown in table 4.2 reveals that 56.3% of the firms have a service quality department whereas 43.8% of the firms do not have a service quality department. This implies that majority of the firms have a service quality department hence their ability to provide relevant responses for this study.

Extent of Adoption of Service Quality Management Practices

The researcher further sought to investigate the extent to which petroleum distributing firms have adopted service quality management practices like top management support and commitment, employee involvement, customer focus, employee training/development, quality information and analysis, reward and recognition and product/service design in their operations. The respondents were required to indicate the extent to which they agreed with the perceived extent of adoption of service quality management practices. The responses were subjected to descriptive statistics and the findings are presented in table 3.

Top Management Support and Commitment

The researcher sought information on the extent to which the top management of the petroleum distributing firms were supportive and committed to the operations of these firms. The findings are presented in table 3

Table 3: Top Management Support and Commitment

Top management activity	Mean	Std. Deviation
Employees are encouraged by top management to consider customer needs and expectations	4.44	.759
Active involvement of top management in quality improvement	4.34	.653
Evaluation of top management for service quality performance	4.09	.928
Management provides the necessary resources to carry out activities efficiently	4.00	.880
Dissemination of management service quality objectives to all employees	3.59	1.012
Average	**4.09**	**0.846**

It can be observed from the study results in table 4.3 above that encouragement of employees by top management to consider customer needs and expectations has a mean of 4.44 and a standard deviation of 0.759. This implies that most of the respondents agreed that top management encourage employees to consider customer needs and expectations. Active involvement of top management in quality improvement has a mean of 4.34 and a standard deviation of 0.653 which confirms that most respondents agreed that top management are actively involved in quality improvement. Evaluation of top management for service quality performance has a mean of 4.09 and a standard deviation

of 0.928 an indication that most of the respondents agreed that top management of petroleum distributing companies are evaluated for service quality performance. Management provides the necessary resources to carry out activities efficiently have a mean of 4.0 and a standard deviation of 0.880. This means that majority of the respondents concurred that the necessary resources to carry out activities efficiently. However, the respondents were not sure whether the management disseminates service quality objectives to all employees. This is supported by a mean of 3.59 and a standard deviation of 1.012.

Employees' Involvement

The extent to which employees were involved in the operational activities of the firms was sought in this section and the findings presented in Table 4.

Table 4: Employees' Involvement

Employee involvement	Mean	Std. Deviation
Employees are encouraged to be totally involved in quality improvement	4.19	.859
Management lets employees participate in achieving organisational goals	4.09	.689
Existence of bottom-up, top-down and horizontal communication among all staff	4.03	.897
Employees get feedback on their quality performance and are encouraged to give comments	4.00	.880
Employees are responsible for the tasks they perform and inspect their own work	3.75	1.078
Average	**4.02**	**0.881**

The findings from the study reveal that encouragement of employees to be totally involved in quality improvement has a mean of 4.19 and a standard deviation of 0.859. This is an indication that most of the respondents agree that employees are encouraged to be totally involved in quality improvement. Management lets employees participate in achieving organisational goals has a mean of 4.09 and a standard deviation of 0.689. This implies that majority of the respondents agree that the management of petroleum distributing firms in Kenya let employees participate in achieving the goals of the organization. The study reveals that existence of bottom-up, top-down and horizontal communication among all staff has a mean of 4.03 and standard deviation of 0.897 implying that the firms have a bottom-up, top down and horizontal communication

among all staff. Providing feedback on quality performance to employees has a mean of 4.0 and standard deviation of 0.880. This confirms that most of the firms provide employees with feedback concerning their quality performance. However, the study reveals that employees being responsible for their work and inspect their work has a mean of 3.75 indicating that this is not the case among the petroleum distributing companies in Kenya.

Customer Focus

The respondents were required to give information on the extent to which petroleum distributing firms were committed to addressing and meeting customer needs. The findings were presented in table 4.5.

Table 5: Customer Focus

Customer focus activity	Mean	Std. Deviation
The firms carry out studies to determine customer needs and wants	4.22	.870
The firms carry out studies to evaluate customer satisfaction	4.22	.751
The firms have a system for collecting and addressing customer complaints	3.97	1.121
The firms encourage their customers to give feedback on quality and delivery performance	3.97	.967
Integration of customers in product/service development process	3.84	1.167
Average	**4.04**	**0.975**

The findings from the study as tabulated in **Table 5** established that carrying out studies to determine customer needs and wants has a mean of 4.22 and standard deviation of 0.870 indicating that most firms carry out studies to determine customer needs and wants. It was also evident that carrying out studies to evaluate customer satisfaction has a mean of 4.22 and standard deviation of 0.751 a confirmation that the firms carry out customer satisfaction studies. However the study established that three aspects of customer focus: having a system for collecting and addressing customer complaints; encouraging customers to give feedback and integration of customers in product/service development have a mean less than 4 but very close to 4. This is a confirmation that these activities were carried out though not to very significant level.

Employee Training and Development

The researcher sought the views of the respondents on what extent their firms adopted employee training and development programs. The findings were presented in table 6.

Table 6: Employee Training and Development

Employee training/development activity	Mean	Std. Deviation
Employees are trained on team working	3.94	1.014
The firms provide continuous training for managerial staff	3.91	.963
The companies offer continuous training for non managerial staff	3.66	1.125
Training needs are always evaluated and addressed	3.50	1.016
The firms often measure employee satisfaction based on the training received	3.41	1.132
Average	**3.68**	**1.05**

It can be observed from the research findings tabulated in **table.6** above that training of employees in teamwork has a mean of 3.94 and standard deviation of 1.014. This mean is close to 4 an indication that a sizable number of firms train employees to work in teams. Providing continuous training for managerial staff has a mean of 3.91. This indicates that a number of firms provide this form of training. Offering continuous training for non-managerial staff has a mean of 3.66. This implies that few firms provide training to no-managerial staff. Evaluating training needs has a mean of 3.5, an indication that that this activity is not very common among the firms. Measuring employee satisfaction based on training received has a mean of 3.41 implying that most of the firms do not measure employee satisfaction based on the training they have received.

Quality Information and Analysis

The respondents were required to give their views on the extent to which quality information and analysis activities were carried out in their firms .The findings are given in table 4.7.

Table 7: Quality Information and Analysis

Quality information and analysis	Mean	Std. Deviation
Harnessing of information to improve key process and services	4.06	.759
The firms collect and analyse data related to their activities	3.84	.847

Use of quality data to evaluate supervisory and managerial performance	3.72	1.085
Quality data and information is timely and readily available	3.66	.971
Availability of quality data and information to all staff	3.34	1.066
Average	**3.72**	**0.946**

The study established that harnessing of information to improve key processes and services has a mean of 4.06 and a standard deviation of 0.759. This means that most petroleum distributing firms in Kenya harness information with the aim of improving key processes and services. Collection of data related to firm activities has a mean of 3.84 and standard deviation of 0.847; use of quality data to evaluate supervisory and managerial performance a mean of 3.72 and use of timely and readily available quality data a mean of 3.66. This is an indication that these activities are carried out by the firms though to a limited extent. However, the study established that there is no availability of quality data and information to all staff as supported by a mean of 3.34.

Rewards and Recognition

The researcher sought respondents views on the extent to which various reward and recognition practices were being carried out in their firms. The findings are presented in table 8.

Table 8: Rewards and Recognition

Rewards and recognition	Mean	Std. Deviation
Existence of reward system to appreciate employee contributions	3.69	1.256
Reward policy and criteria is known to all employees	3.56	1.243
Employees are well motivated	3.44	1.268
Employee's remuneration is proportional to work knowledge and contribution	3.37	1.362
Average	**3.52**	**1.282**

The findings in table 4.8 show that petroleum distributing firms have generally a weak reward and employee recognition system. Appreciation of employee contribution with corresponding reward had the highest adoption level with a mean of 3.69. The knowledge of the reward policy and its criteria to employees came second with a mean of 3.56 followed by employee motivation with a mean score of 3.44. The least practiced was the

employee remuneration proportionality to knowledge and contribution which had a mean of 3.37.

Product and/or Service Design

The respondents were required to give their views on the extent to which various product and /or service design practices had been adopted in their firms. The findings were presented in table 9.

Table 9: Extent of Adoption of Product or Service Design

Product/service design	Mean	Std. Deviation
New product/service is tested before its offered to customers	4.03	.967
The companies carry out thorough review of new product/service design before the product/service is produced or offered	3.84	.920
Customer requirement are factored in the development of a new product/service design	3.84	1.051
Product/service design and development involves everybody	3.13	1.157
Average	**3.71**	**1.024**

The findings as tabulated in table4.9 indicate that the testing of new product/service by petroleum distributing firms before offering to customers was highly adopted with a mean of 4.03 and standard deviation of 0.967. It was followed by the practice of factoring in customer requirement in the development of a new product/service design and carrying out thorough review of new product design before production both with a mean of 3.84. The least practiced was the involvement of everyone in the product/service design which had a mean of 3.13 and standard deviation of 1.157.

Summary of Service Quality Management Practices

Here, the researcher sought to rank the summary of the various types of service quality management practices. The findings of the study are presented in table 10.

Table 10: Summary of the Extent of Adoption of Service Quality Management Practices

Service quality management practices	Mean	Rank
Top management support and commitment	4.09	1
Customer focus	4.04	2

Employees' involvement	4.02	3
Quality information and analysis	3.72	4
Product/service design	3.71	5
Employee training and development	3.68	6
Rewards and recognition	3.52	7

It is apparent from the data tabulated in table 4.10 that top management support and commitment with a mean score of 4.09 is ranked first. This implies that majority of the petroleum distributing firms in Kenya have adopted top management support and commitment as part of their service quality management practices. It is also apparent from the study results that customer focus with a mean score of 4.04 is ranked in the second position. Employee's involvement (mean = 4.02) comes third followed by quality information and analysis, product/service design, and employee training and development with the mean scores of 3.72, 3.71 and 3.68 respectively. Rewards and recognition is ranked last with a mean score of 3.52, an indication that it is the least adopted service quality management practice among the surveyed petroleum distributing firms in Kenya.

Challenges Affecting Implementation of Service Quality Management Practices

The researcher also sought to establish the challenges that petroleum distributing firms in Kenya face in implementation of service quality management practices. The challenges were rated on 1-5 scale and were ranked based on the effect each challenge had on the implementation of service quality management practices by petroleum distributing firms. The study results are presented in Table 11.

Table11: Challenges of Implementing Service Quality Management Practices

Challenge	Mean	Std. Deviation	Rank
Lack of visionary leadership	4.22	.832	1
Lack of top management support	4.16	.954	2
Lack of employee commitment	4.13	.942	3
Inefficient transport rail and road networks	4.06	.948	4
Lack of enough resources	4.00	1.047	5
Employee resistance to change	4.00	.916	5
Inadequate information on service quality management practices which hinder successful implementation	4.00	1.047	5

Long lead time to import petroleum product	3.91	.893	6
Setbacks related to costs of implementation	3.63	1.129	7

From **Table 11**, it is apparent that the findings indicate that lack of visionary leadership was the biggest challenge to the implementation of service quality management practices with a mean of 4.22 and standard deviation of 0.832. This was followed by lack of top management support with a mean score of 4.16; lack of employee commitment with a mean of 4.13; inefficient transport rail and road networks with a mean of 4.06; lack of enough resources in a firm, lack of enough resources, the resistance to change by employees and lack of adequate information all with a mean of 4.0. Long lead to import petroleum product has a mean of 3.91 and the one considered as the least challenge is setbacks related to costs of implementation of the service quality management practices with a mean score of 3.63 and a standard deviation of 1.129.

The Relationship Between SQMP and Operational Performance

Here, the researcher sought to determine the relationship between service quality management practices and operational performance. The service quality management practices were rated on a 1 -5 scale for various operation performance indicators. The average responses obtained for each of the aspects of the extent of adoption of service quality management practices and composite operational performance are presented in table 12**.**

Table 12: Average Responses of each Aspect of Service Quality Management Practices and Corresponding Composite Operational Performance

Respondent	Y	X_1	X_2	X_3	X_4	X_5	X_6	X_7
1	3.5	4.6	4.2	5	4	3.4	2.5	3
2	3.7	5	4.6	5	4.6	4.6	4	4.75
3	4.2	4.6	4.6	4.6	4.2	4.4	4	4
4	4.9	4.8	4.6	4.8	2.8	4.4	3.75	4.75
5	3.5	3	2.8	3	2.8	2.8	3.5	2.25
6	3.7	4.8	4.8	5	5	5	5	5
7	3.4	3.8	4	3.8	3.2	3.6	3.75	4
8	4.3	4.2	4.2	4.2	4.2	4.2	4.25	4.25
9	4.3	3.8	4.2	4.4	3.8	3.8	3.75	4
10	4.8	4.8	4.8	4.8	4.6	3.4	5	4.5
11	3.7	3.2	3.6	2.8	3.4	2.6	1.5	3.75
12	3.8	3.2	2.8	3	3.6	3.6	4.75	3

13	3.8	3.2	2.8	2.2	3.4	3.8	3.75	3.5
14	3.9	3.8	3.2	4.6	4	4	3.75	3.75
15	4.9	4.6	4.6	4.4	4.6	4	2.75	4
16	4.5	5	5	4	4.8	5	5	5
17	4.2	4.2	4.2	4.4	4.6	4.4	5	4.75
18	4.3	4.4	4.4	4.8	4	4	4	3.75
19	3.8	4.4	4	3.6	3	4	4.25	3
20	3.6	3.4	4.2	3.2	3.4	2.8	2.25	3
21	4.2	3.8	4.6	4.2	4	4.4	3.5	4.75
22	3.7	3.6	3.2	2.8	3	2.8	3	2.75
23	4.8	3.8	4	4.8	4.8	3.8	4	4.25
24	4.5	4.4	4.4	4.4	4.4	4.8	4.25	4
25	3.4	3.6	3.4	4	2.8	2.4	2	3
26	3.8	4.6	4.4	3.8	2.8	3.6	1.5	3
27	3.5	3.8	3.8	3.8	3.2	3.2	3.25	2.75
28	4.6	4.6	3.8	4.6	4.8	4	4.25	3.75
29	4.9	3.6	3.8	3.2	3.2	3.8	3.5	4
30	4.5	4.4	3.6	4.6	3.6	4	3.5	3.5
31	4.4	4.8	4.6	4.4	4	4.2	3.5	3
32	4.5	3	3.4	3.2	1.6	2.8	1	3.5

Where:

Y = Operational performance index

$\mathbf{X_1}$= Top management support and commitment

$\mathbf{X_2}$= Employees' involvement

$\mathbf{X_3}$= Customer focus

$\mathbf{X_4}$= Employee training/development

$\mathbf{X_5}$= Quality information and analysis

$\mathbf{X_6}$= Rewards and recognition

$\mathbf{X_7}$= Product/Service design

The researcher applied the regression model to determine the relationship between service quality management practices and operational performance. The results are as presented in the following parts.

Table 13: Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.518[a]	.269	.055	.47410	.269	1.259	7	24	.312

a. Predictors: (Constant), Product/Service design, Top management support and commitment, Rewards and recognition, Employee training or development, Customer focus, Quality information and analysis, Employee involvement

As shown in table13 above, the value of Adjusted R Square is 0.055, which is 5.5%. The value is very small implying that the considered aspects of service quality management practises are insignificant in determining operational performance of petroleum distributing firms in Kenya. This further implies that the other 94.5% is due to other factors that were not considered in this study. It is also apparent from the table that the significance value is 0.312, which is quite high compared to the critical value of 0.05.This implies insignificance relationship between the independent and the dependent variables. From the table also, the correlation coefficient value is 0.518 which is fairly small, an indication of a weak relationship between the SQMP's and the operational performance.

Table 14: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B		Correlations		
		B	Std. Error	Beta	T	Sig.	Lower Bound	Upper Bound	Zero-order	Partial	Part
1	(Constant)	2.605	.606		4.296	.000	1.353	3.856			
	Top management support and commitment	.059	.332	.075	.177	.861	-.627	.745	.347	.036	.031
	Employee involvement	-.001	.290	-.002	-.005	.996	-.599	.597	.386	.000	.000

Customer focus	.054	.191	.084	.281	.781	-.341	.448	.350	.057	.049
Employee training or development	-.054	.177	-.087	-.303	.765	-.420	.312	.304	-.062	-.053
Quality information and analysis	.077	.252	.109	.306	.762	-.444	.598	.418	.062	.053
Rewards and recognition	-.013	.134	-.027	-.095	.925	-.290	.265	.258	-.019	-.017
Product/Service design	.268	.200	.407	1.343	.192	-.144	.681	.496	.264	.234

a. Dependent Variable: Operational performance index

The regression equation established from the data in table14 above is as follows: $\mathbf{Y = 2.605 + 0.059X_1 - 0.001X_2 + 0.054X_3 - 0.054X_4 + 0.077X_5 - 0.013X_6 + 0.268X_7}$.The equation is not relevant because all the seven aspects of SQMP considered were found insignificant in the determination of operational performance of the petroleum distributing firms in Kenya since all had significance values above 0.05.

Table 15: Correlations Between Operational Performance and SQMPs

SQMPs	**Top management support and commitment**	**Employees' involvement**	**Customer focus**	**Employee training/development**	**Quality information and analysis**	**Rewards & recognition**	**Product/ Service design**
P	0.347	0.386	0.350	0.304	0.418	0.258	0.496
r	0.026	0.015	0.025	0.045	0.009	0.077	0.002
Significance at 0.05	Significant	Significant	Significant	Significant	Significant	Not significant	Significant

Further, the findings from correlation matrix (Appendix IV)and as presented in table15, reveal that all the SQMPs except rewards and recognition had significant correlation coefficient with operational performance. Product/service design had a significant coefficient of 0.002 followed by quality information and analysis, employee involvement, customer focus, top management support and commitment, employee training and development with values of 0.009, 0.015, 0.025, 0.026 and 0.045 respectively. Rewards and recognition had an insignificant correlation coefficient of 0.077.

Conclusions

The adoption of service quality management practices by petroleum distributing firms in Kenya is inevitable and is already effected by many of the firms concur with Jin (2005)'s assertion that the practices of service quality management are inevitable since they provide entities with holistic management philosophy that focuses on continuous improvement in all functions of a service organization. The practices as stated by Jin (2005) are top management support and commitment, employee's involvement, customer focus, employee training and development, quality information and product/service design. As revealed by the study, top management support and commitment is the most adopted service quality management practice by petroleum distributing firms in Kenya. This corresponds to Saraph (1989)'s argument in the reviewed literature that top management plays a decisive role in paradigm shifts in critical areas such as quality management, product development and innovation. When top management is committed to quality it will assign a higher priority to quality, provide adequate resources to the implementation of quality management efforts, and invest in human and financial resources and make quality a dimension in performance evaluations for everyone in the organization.

The findings on the challenges affecting implementation of service quality management practices by petroleum distributing firms in Kenya correspond with the assertions made in the literature. For instance, the findings that lack of visionary leadership affects implementation of service quality management practices by petroleum distributing firms in Kenya is in agreement with the argument put forward in the literature review by Nwabueze (2001) that lack of visionary leadership with a clear understanding of the concepts of service satisfaction, quality, and values is a great challenge in stimulating the entire organization toward accomplishing a service quality management vision.

The study results that lack of top management support as another challenge affecting the implementation of service quality is also consistence with the Rajendran and Anantharaman (2001a)'s suggestion that top management commitment to service quality management is a prerequisite for effective and successful implementation of high quality services. The findings that lack of employee commitment; lack of enough resources in a firm; lack of enough resources; resistance to change by employees and setbacks related to costs of implementation are in line with Keating and Harrington (2003)'s observation that inadequate perception of service quality management practices by most employees, resource constraints and the employee resistant to change, are major challenges to the implementation of SQMP.

Recommendations

The study recommends that service quality management practices, especially top management support and commitment, employee's involvement, customer focus, employee training and development, quality information and analysis, rewards and recognition and product/service design, should be adopted by every firm, in the

petroleum industry and other industries that comprise the Kenyan economy due to their positive impact on operational performance. The firms should also be in the front run in addressing the challenges which affect the implementation of service quality management practices in order to reap the full benefits of these practices.

The researcher further recommends that policy makers like the ERC and MOE should ensure that all petroleum distributing firms in Kenya fully adopt service quality management practices as one way of ensuring that the government gets maximum revenue from these firms and this will lead to better and improved lives of Kenyans.

Limitations

The study adopted a descriptive cross sectional survey that involved a single round of data collection that affected the study effectiveness and accuracy. The study faced some resistance from some of the respondents as they feared that the information they gave would be used by competitors to fight them business wise. This was however resolved through the issuance of the introduction letter and explanation that the information would be confidential. Thirdly, the researcher also faced challenges in terms of resources such as finances for commuting to the different firms and time in the sense that, a lot of time was needed for going to the firms, meeting with managers, convincing them to fill the questionnaires and finally going back to pick them.

The study should be carried out among the petroleum distributing firms in Kenya to explore other factors such as firm size and years of operation that may enable determine fully the factors that affect the operational performance of petroleum distributing firms in Kenya.

REFERENCES

Alemu, M., Helo, P., Takala, J. &Fentahun, M. (2011).Effects of quality management practices and concurrent engineering in business performance. *International Journal of Business and Management*, *6*(3), 45-62.

Bitner, M., Booms, B., &Mohr, L. (1994). Critical service encounters: the employee's view. Journal of Marketing, *58*(4), 95-106.

Bolton, R. N. & Drew, J. H. (1991). A longitudinal analysis of the impact of service changes on customer attitudes.*The Journal of Marketing*, *55*(1), 1-10.

Doreen, I. (2013). *Service quality and operational performance of Tour operators in Kenya,*(Unpublished MBA research project.).University of Nairobi,Nairobi,Kenya

Gefen, D. (2002). Customer loyalty in e-commerce.*Journal of the association for information systems*, *3*(1), 27- 51.

Githagui, N. &Ngugi, P. K. (2013). Determinants of effective implementation of total quality management in thermal power plants in Kenya: A case of Iberafrica. *International Journal of Arts and Entrepreneurship*, *1*(2), 367-382.

Jin, L. (2005). *The effects of service quality management practices on customer Satisfaction.*Paichai: Paichai University Press.

Johnston R, & Clark, M.(2001). *Service operations management.* New Jersey: Prentice Hall Publishers.

Keating, M. & Harrington, D. (2003).The challenges of implementing quality in the Irish hotel industry.*Journal of European Industrial Training*, *27*(9), 441-453.

Kieyah, J. (2011). *Petroleum Industry in Kenya.* Amsterdam: The Amsterdam Centre for Law and Economics.

Lakhal, L., Pasin, F., &Liman, M. (2006).Quality management practices and their impact on performance.*International Journal of Quality and Reliability management*, *23*(6), 625-646.

Lewis, R. C., & Booms, B. H. (1983).The marketing aspects of service quality.*Emergingperspectives on services marketing*, *65*(4), 99-107.

Nilsson, L., Johnson, M. &Gustaffson, A. (2001). The impact of quality practices on customer satisfaction and business results. *Journal of Quality Management, 6*(1),5-27.

Nwabueze, U. (2001). An industry betrayed: The case of total quality management in manufacturing. *The TQM Magazine*, *13*(6), 400-409.

Omollo, K. (2011). *Effect of Service quality management on the financial performance of commercial Banks in Kenya.*(Unpublished MBA research project.).University of Nairobi,Nairobi,Kenya

Owino, K. (2000). Petroleum Industry since liberalization.*Institute of Economic Affairs Bulletin Issue No. 41.*

Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL: A multiple item scale for measuring consumer perceptions of service quality. *Journal of Retailing*, *64*(1), 14 - 40.

Rachilo, G. (2013). *Internal Service Quality Management and Operations Performance among Commercial Banks in Kenya.*(Unpublished MBA research project.).University of Nairobi,Nairobi,Kenya

Sampio, P. (2014). Relationship between quality approaches and their impact on Portuguese companies.*International Journal of Quality & Reliability Managemen*t *16(*2), 277 – 330

Saraph, B. (1989). The effects of organizational context on quality management. *Total Quality Management Journal,37*(9), 1107 - 1124.

Sureshchandar, G., Rajendran, C., &Anantharaman, R. (2001a). A conceptual model for total quality management in service organizations.*Total Quality Management*, *12*(3), 343 - 363.

Terziovski, M., Feng, M. & Samson, D. (2007). Relationship of ISO 9001:2000 quality system certification with operational and business performance: A survey in Australia and New Zealand-based manufacturing and service companies. *Journal of Manufacturing Technology Management*, *19*(1), 22 – 37.

Wanjiku, C. (2011). *Impact of petroleum consumption on economic growth in Kenya.*(Unpublished MBA research project.).University of Nairobi,Nairobi,Kenya