TOTAL QUALITY MANAGEMENT AND OPERATIONAL PERFORMANCE OF OIL MARKETING FIRMS IN KENYA, A CASE OF GULF ENERGY LIMITED

By

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DECLARATION

This research project is my original work and has not been submitted for an award of a degree in any other university.

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ABBREVIATIONS

AGO	Automotive Gas Oil
DPK	Dual Purpose Kerosene
ERC	Energy Regulatory Commission
GDP	Gross Domestic Product
GEL	Gulf Energy Limited
GET	Gulf Energy Terminal
KEBS	Kenya Bureau of Standards
KPC	Kenya Pipeline Corporation
KRA	Kenya Revenue Authority
LPG	Liquefied Petroleum Gas
MW	Megawatts
NOCK	National Oil Corporation of Kenya
OMC	Oil Marketing Companies
PIEA	Petroleum Institute of East Africa
PMU	Petroleum Monitoring Unit
PMS	Premium Motor Spirit
QMS	Quality Management Systems
SPSS	Statistical Package for Social Sciences
TQM	Total Quality Management

ABSTRACT

Competitive advantage in the oil marketing industry is gained when a firm provides products and services of a quality which meets the requirements of the consumers. Customer satisfaction is derived from Total Quality Management (TQM) practices. This survey sought to assess the effect of TQM practices (customer focus, top management commitment, employee involvement, systems approach, process management and teamwork) on operational performance of oil marketing companies in Kenya, with a focus on Gulf Energy Limited (GEL). The specific objectives of the study were: to determine the extent to which TQM practices are implemented at GEL; to determine the challenges affecting the implementation of TQM at GEL; to determine the extent to which government legislation affects TQM in GEL; and to establish the relationship between TQM implementation and operational performance at GEL. Descriptive case study design was adopted in order to achieve the study objectives. A case study of GEL was conducted to represent the oil marketing firms in Kenya. A total of 39 structured questionnaires were issued to the respondents in various GEL fuel stations using a drop-and-pick-later method. The Cronbach's Alpha was used in testing the reliability of the data collected. Descriptive statistics showed the general characteristics of the study variables. Linear regression was computed to generate the model summary, ANOVA and coefficients tables as inferential statistics to establish the relationship between the dependent and independent variables. The frequencies on the respondents identified that most respondents had attained some level of education and had some level of experience. Generally, the respondents agreed to the statements on the study variables where the responses were ranked on a five point Likert scale. The results showed that TQM practices, top management commitment and customer focus had a significant influence on the firm's operational performance. It was also observed that the firm experiences a myriad of challenges including lack of adequate training and staff orientation, which greatly slow down operational performance. Government involvement was also cited as one of the factors affecting operational performance. The investigation prescribes that the administration should be more dedicated to quality and give resources and direction on quality implementation, and these ought to be in accordance with the firm's targets and objectives. Policy makers also ought to give a decent domain by providing sufficient resources if the intended improved performance of the oil marketing companies is to be realized.

CHAPTER ONE: INTRODUCTION

1.1 Background to the Study

In an attempt to be flexible, efficient and more competitive in the current business environment, several organizations and even countries have begun to realize the benefits of embracing Total Quality Management (TQM). The TQM has transitioned through time from assessment of quality, control of quality and quality guarantee. This, in turn has changed organizations from being heavily reliant on assessment of quality, dictatorial management and one that practices centralized decision making to one enhances staff co-operation among themselves, responding to feedback and demand of customer and ensuring their fulfilment, constant improvements in quality and having continuous improvement on all processes

The TQM therefore, is a management concept that emphasizes on the need of meeting both the demands and requirements of the consumers; it promotes improvement in effectiveness, competitiveness, and flexibility of the entire organization (Oakland, 1995). It entails the planning, organization, and understanding of all activities, and is applicable to everyone in the organization notwithstanding their position or rank. The TQM comprises of several components including; customer focus, progressive quality addition, employee enlightenment, quality tools use, designing of products, managing the process and supplier quality control. Customer attention is the main and most important component of TQM philosophy. The TQM offers inducements for workers as a way of identifying quality issues as well as reward the workers for such achievements. Employees play a vital role in driving a firm to achieve high quality and thus should be encouraged to make the right

decisions in relation to the drive for quality achievement. This can be achieved by using techniques such as brainstorming, discussions, and teamwork regularly to correct problems. Training is essential for the workers to own the quality improvement process. The workers need regular training so that they can appreciate better how to identify and provide solutions for quality problems.

A major concern of TQM is continuous improvement of performance, to achieve this, employees are required to understand what is expected of them, how to accomplish the expectations, when to undertake in the expected activities, the tools and skills required to undertake tasks and finally have the capability to monitor and evaluate performance based on the current level of job performance (Kanji & Asher, 1993).

1.1.1 Total Quality Management

The TQM is an administration technique, directed at achieving long-range achievements and milestones of a firm through enhancing customer satisfaction. This management approach demands unity and togetherness among all employees to improve services, products, culture, and processes in an organization. There is no one definition for TQM, as such many scholars and institutions have attempted to come up with working definitions. The TQM is defined as a philosophy of organizational management which allows the attainment of stakeholders' needs and expectations without having to compromise ethics (Chatered Quality Institute, n.d.). The Total Quality Management is sometimes known as an "administration approach, which guarantees long tern accomplishment through creating and maintaining consumer loyalty" (American Society for Quality, n.d.). The TQM gives

a foundation to completing compelling quality and efficiency developments which promote competitiveness and increases profitability of an organization (Deming, 1986).

The TQM originated from the quality movement that propelled Japan to be a strong force in the world economy. Sergesketter and Roberts (1993) argued that the Japanese philosophy of quality was initially placing a lot of emphasis on the product and its performance but later shifted its concern to customer satisfaction. Youngless (2000) also made an argument that TQM instilled a philosophy of doing work right the first time instead of relying on inspection of products and services quality after completion. The TQM implementation processes places emphasis on the organizational culture change which is significant and will take time and endurance for process completion. This process takes time to implement and does not occur within a nightfall. The results of TQM implementation may take many years to be evident, implementation of TQM may take up to more than 10 years to meet its objectives as suggested by some experts. The TQM is also defined as management approaches implemented by specific organizations to facilitate productivity and enhance quality (Bank, 2000). Barnard (1999) describes TQM as a comprehensive organization-wide system approach that works both vertically and horizontally, involving all departments even extending to include both suppliers and customers.

The TQM has created a shift in management style from the traditional methods of statistical process control, and organizations are now focusing more on organizational cultural change as a vital aspect of process control. The TQM approach is now a survival tactic

adopted by many organizations for the long term and is adopted by all employees from the top management to lower management levels to ensure attainment of objectives. An organization that has successfully implemented TQM will ensure that their goods and services are fit for purpose to ensure reliability and consistency, create a delight to the consumer and provide a more quality product than that of the competitor, the price notwithstanding (Harris, McCaffer, & Edum-Fotwe, 2013).The TQM can therefore have a revolutionary impact on any organization that is experiencing stiff competition and wants to build competitive advantage. TQM implementation especially among Oil Marketing Companies (OMCs) in Kenya could lead to overall high quality standards in the provision of services, which will eventually lead to improving the operational performance of the entire petroleum industry.

The TQM assumes that; employees, management, suppliers, distributors and customers, all are essential in promoting products and service quality through production and consumption (Waldman, 1994). Organizations that employ TQM are likely to have their stakeholders reap the benefits of the increased customer satisfaction resulting from the met expectations. Research has shown that there exists a correlation between TQM and operational performance of most organizations. In today's business environment, we have many organizations offering the same kind of products and services to a common market, hence the customers will tend to choose firms that offer improved quality.

1.1.2 Operational Performance

Operational performance consists of the real outcomes of a firm measured in relation to its goals and aims (Richard, Devinney, Yip, & Johnson, 2009). Accurate operational performance measurement provides an opportunity for managers to correct errors, cut on costs and ensure customer satisfaction. Neely (2007) states that organizations should start placing value on effectiveness and efficiency of actions. This can be expressed both qualitatively and quantitatively. According to him, performance is closely related to efficiency and effectiveness. For any organization to compete well in the market it has to produce the right products and services using minimal inputs, this is why firms need to embrace the idea of TQM in all their operations in order to have a strong operational performance.

Public agencies have a larger task to define and assess results than private sector firms whose performance results are virtually exclusively linked to financial objectives (Upadhaya, Munir, & Blount, 2014). Public agencies have to conform to the compound guidelines that administer their performance programmes. Firm operational performance and improvement as pointed out by Mahmoud and Carlos (2010) can be accomplished by building a strong culture around operational excellence, training and equipping the workforce on the techniques and tools of process improvement, deploying real-time visibility process management technology and putting in place appropriate measures as well as controls.

This study narrowed down operational performance to two indicators, customer satisfaction and employee morale. Customer contentment is the greatest measure of operational performance of a firm mainly due to the reason that satisfied customers will make repeat sales hence increasing a firm's profitability. Employee morale is also significant because motivated employees will enhance service provision. The TQM is mainly interested in ensuring quality in all service provisions, hence if employees have morale for their work, then they will provide the best service offering ensuring that there are repeat customers.

1.1.3 Oil Marketing Firms

The petroleum industry is crucial in promoting the economy of Kenya. Petroleum is Kenya's major source of commercial energy and it constitutes about 80 percent of Kenya's commercial energy requirements (Wanjiku, 2011). In his study on the petroleum industry since liberalization, Owino (2000) found out that nearly 67 percent of Kenya's energy needs are provided by petroleum products and the country spends an average of four percent of the Gross Domestic Product (GDP) in the importation of petroleum products annually. Petroleum products don't have any close substitutes and this makes it be a major determinant in Kenya's economic growth by determining the level of inflation, the costs of production in industries and even the level of employment.

The petroleum industry is comprised of a number of institutions (Kieyah, 2011). The Ministry of Energy is responsible for managing the energy resources in Kenya. There are a number of state corporations under the ministry which are tasked with daily operations

and general oversight of the energy sector. The Energy Regulatory Commission (ERC) has the responsibility of regulating the price of petroleum products in the country, it does this through setting the maximum pump prices monthly, determining the quota which each oil marketing firm will receive in the market, floating tenders for the purchase of petroleum products and ensuring that there is no fuel adulteration by conducting random monthly fuel intelligence surveys on petroleum service stations across the country. The Kenya Pipeline Corporation (KPC) is tasked with the responsibility of receiving the petroleum products from the Port of Mombasa and supplying them through the pipeline to various towns in Kenya, which have the connectivity of the pipeline. The Kenya Revenue Authority (KRA) monitors the distribution and ensures that all taxes are duly paid for before the sales. The Petroleum Institute of East Africa (PIEA) provides training and industry statics in the oil industry.

There are a number of oil marketing firms in Kenya (see Appendix III). The National Oil Corporation of Kenya (NOCK) is the only state-owned oil marketing firm, others are majorly large multinational companies like VIVO (which owns the Shell brand), Total Kenya, Oilybia, and Engen among others. There are also locally owned oil marketing firms like GEL, Kobil and One Petroleum among others. These oil marketing firms deal with the following fuel commodities; Automotive Gas Oil (AGO), Premium Motor Spirit (PMS), Fuel Oil (FO), Illuminating Kerosene (IK), jet A1, Liquefied Petroleum Gas (LPG), and lubricants among others. Since the pump price is regulated by ERC, in order for local companies like GEL to compete with large multinationals, they have to embrace TQM in their operations and ensure that these fuel commodities are availed to the customer at the

correct quantity, quality, at the appropriate right time to avoid stock-outs and in the right manner to the expectation and satisfaction of the consumers.

1.1.4 Gulf Energy Limited

The GEL was started in 2005 with the aim of offering energy solutions in the East African region (Gulf Energy Limited, n.d.), joining the list of oil marketing firms in Kenya. From a humble beginning, the company has since grown and is now the fourth largest OMC by overall market share, commanding a market share of 7.5 percent according to industry statistics for the period January to March 2017 (Petroleum Institute of East Africa, n.d.). On the same note, it controls 20.5 percent share of the overall petroleum sales to the aviation industry during the same period and 3 percent of the retail market share and 8.7 percent of the total resellers share.

The GEL currently owns a petroleum depot in Nairobi, and a total of 38 service stations spread across major town centers in Kenya, and is still on a rapid expansion. They also have dealership agreements with several individuals and companies which has given them a commanding presence in the market. The GEL has diversified its operations, apart from the retail petroleum business, they are also engaged in petroleum re-selling, lubricants packaging and selling business, LPG business, supply of petroleum products to the aviation industry, power generation sector, they were the first indigenous power development company with the 84 Megawatts (MW) medium speed diesel power plant in Athi River, and are currently involved in the development of the first coal power plant in conjunction with AMU power company in Lamu. Their products include crude oils, lubricants, bitumen

and bituminous products, fuel products, LPG, specialty products, solvents and petrochemicals.

1.1.5 Gulf Energy Limited and Total Quality Management

The GEL implements and maintains its Quality Management System (QMS) on the basis of the requirements of International Organization for Standardization (ISO) 9001:2015 as well as all the applicable industry regulatory, statutory, national and international standards. It aims to achieve this through proactive innovation and research-based technology and continually improve the effectiveness of QMS. They also have a framework for the establishment and review of quality objectives that are supported by their quality policy. The GEL has established structures to ensure that all the employees embrace quality practices in all their operations.

The GEL has established a departmental quality objectives manual, which contains the quality objectives for each function/department in the company. These quality objectives can be measured and are in line with the quality policies of the company which includes a commitment to continual improvement. It charges respective departmental managers with the establishment of these quality objectives. The GEL also has a quality management manual which has been modeled according to the ISO 9001:2015 international standards requirements, all members of staff are required to observe the requirements of the manual.

1.2 Statement of the Problem

Since the onset of the new millennium, disruptions in the business sector have been the norm and many companies have been forced to close down due to failure to adapt with the ever increasing competition and the ever-changing nature of the business environment. In Kenya, various OMCs have been forced to close down completely or shift to new markets because they could not keep up with environmental changes. Examples include Gapco Kenya limited which was acquired by Total Kenya in the year 2017, and Hashi and Engen petroleum companies, which have been forced to close business and shift to different markets. The OMCs operate under a much-regulated environment where the quantities they sell and the price at which to sell is strictly regulated by the government (Munyao, 2014). The government of Kenya regularly reviews the maximum pump prices based on certain parameters like the landed costs and the dollar exchange rate and all the OMCs have to follow those price regulations In order to survive in such market conditions, companies shall only compete on the basis of providing superior quality in all their service offering.

Organizations are expected to be able to determine how much they are ready and willing to invest in TQM in relation with their expected results. The TQM has received great attention from many researchers, many have suggested that TQM is a valuable instrument for fastening learning and boosting a company's competitive gain (Martinez-Costa, Martinez-Lorente, & Choi, 2008). A great deal of study surveys the impact of TQM on operational performance and some researchers have found positive results (El Shenawy, Baker, & Lemak, 2007). Other researchers have found no significant impact between TQM and operational performance (Powell, 1995). Whereas some studies have found out a

negative impact (Davis, 1997). In their study on TQM implementation on performance of oil and gas industry, Sulaksono, Wibowo, and Febri (2017) found leadership and cooperation to have a relevant and positive relationship to competitive performance suggesting that TQM be used as a parameter of the company's competitive performance. Their study narrowed only on competitive performance and seemed to narrow down on leadership ignoring the role of other members of the organization.

Aletaiby, Kulatunga & Pathirage (2017) focused their study on key success factors of TQM in Iraq oil industry and were able to identify customer attention, continuous progress, development and training, quality-oriented culture, process management, communication, empowerment and involvement and involvement from top management as the key factors of TQM success that direct employee satisfaction and improved work climate. In their study, they were not able to link these success factors and operational performance. Locally, Omar (2017), conducted a study on TQM practices on operational efficiency of container depots in Mombasa County and concluded that TQM helped the container depots to gain competitive advantage and acted as an indicator for enhanced organizational process in the sector. He gave a recommendation that identical researches be carried out in other sectors to find out whether the findings are reflective in nature. In his study on the effect of TQM on operational performance of petroleum distributing companies in Kenya, (Munyao, 2014) found out that when management prioritizes quality, it was committed to improved quality by providing resources and investing in human capital and finances.

There are several studies which have been undertaken on the relationship between operational performance and TQM, but not much has been done locally in the petroleum industry especially on locally owned OMCs. The GEL has been on the forefront in enhancing quality in all its operations, evidenced by its implementation and maintenance of the QMS based on ISO 9001:2015. This study therefore, sought to answer the question what is the impact of the implementation of TQM practices on operational performance of OMCs, a case study of GEL.

1.3 Objectives of the Study

The general objective of this study is to establish the impact of TQM practices on operational performance of GEL. The specific objectives was to:

1. Determine the extent to which TQM practices are implemented at GEL.
2. Determine the challenges affecting the implementation of TQM at GEL.
3. Determine the extent to which government legislation affects TQM in GEL.
4. Establish the relationship between TQM implementation and operational performance at GEL.

1.4 Value of the Study

This research and its findings will add to the already known literature on TQM. Researchers and academicians will find more information on TQM. The study will also lead to theory development and assist in addressing some of the knowledge gaps existing in this subject area. The recommendations of this study will facilitate the need for further study in matters relating to TQM. Policy makers in the oil marketing firms and in extension the petroleum

industry will benefit greatly from the outcomes of this study. The study will elaborate on the appropriate TQM practices that can be employed by these organizations. The study will shed more light on the correlation between TQM practices and operational performance of companies in the industry. Other firms in the service sector and other industries shall also benefit from this study because the findings shall be applicable to any industry not just in the petroleum industry. The GEL will be the greatest beneficiary of this study because the researcher shall study the level of execution of TQM practices in GEL and give recommendations on how the company can improve its services through the proper implementation of TQM practices.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter is split into three major sections, the first section is the theoretical framework, where the theories and models on which the research was based on is discussed. The second part looks at the empirical review, which consists of, summary of previous studies done both locally and internationally, their findings and the gaps, which this study attempted to address. Lastly, the conceptual framework is presented.

2.2 Theoretical Framework

This section presents the theories that formed the foundation of this study. These theories include the Deming theory, the European Foundation for Quality Management (EFQM) model and the Resource-Based View (RBV) theory.

Deming (1982) identified that a majority of quality related problems were as a result of processes and not individual errors. He observed that, once an organization began implementing TQM, its focus shifted from identification of errors to the review and improvement of processes leading to a permanent disabling of the emergence of such errors. To do this, Deming came up with a management model that comprises a set of 14 points which are: developing consistency focused on objectives, implementing new philosophies, minimizing mass inspections, stop awarding a business on the basis of price, focusing on long-term improvements on production and service delivery, implementing new efficient and better training, adopting relevant and improved management approaches, eradicating fear in the company, eradication of barriers experienced in departments,

abolishing quantity-driven goals, facilitating training and development of all employees, and ensuring top management supports and implements the above 13 points.

He also identified seven deadly habits that hinder the performance of an organization and the barriers that prevent the realization of quality goals. The seven habits are:- lack of purpose constancy, too much focus on short-term profits, evaluations of performance that, he noted have a devastating effect on employees, job hopping by top management, leading an organization using visible data and figures, large expenses on medical covers and excessive liability costs. He claimed that adoption of the 14 points would help cure the seven deadly diseases. Deming suggested a system based on knowledge and is comprised of four points; appreciation system, which enhances understanding of the workings of systems and processes in a company; variation knowledge, which creates an appreciation of the differences existing and their causes, knowledge theory, which emphasizes on the aspects that need to be known, and psychology knowledge, which leads support of human nature through understanding.

The OMCs in Kenya can improve their operational performance if they adopt the 14 points suggested by Deming and avoid the seven deadly sins. The Deming model offers opportunities for further development and management of quality dimensions effectively. Identification of challenges to TQM implementation in OMCs in Kenya is essential in improving their operational performance. Deming's seven deadly diseases provide insight on what OMCs need to avoid to be able to achieve higher performance. This research developed a survey instrument based on some of the points suggested by Deming in order

to elicit responses that was used to draw relevant conclusions concerning TQM in the petroleum industry.

The second theory used in the advancement of this study is the RBV theory. Firms use RBV approach to enable them attain competitive advantage based on their strategic resources. These strategic resources are the pillar with which firm capabilities are developed leading to high performance over a long timeline. Using RBV, organization can assess competitive advantage within the institution rather than assessing external competitive advantage (Barney, 1991). The theory suggests that firm capabilities are a critical contributor to an organization's competitive performance (Tippins & Sohi, 2003). Capabilities are the capacities of an organization to allocate resources, especially in a combination to attain the desired outcome (Amit & Schoemaker, 1993). Firms should concentrate on their core competencies to edge out competitors by creating products that are difficult to copy. The RBV is therefore, a vital management concept, which uses the inside-out approach in developing a successful strategy (Connor, 2002).

Grant (2010) describes a hierarchy of a firms potentialities, as specialized potentialities combined into broader functional potentialities such as manufacturing, information technology and marketing capabilities. Functional capabilities then form cross-functional capabilities such as new product development and support of customer capability. Also, gaining competitiveness, firms' resources are located in a firm, thus the competitive advantage of a firm is built using value-adding resources which are essential inputs in producing and distributing services and products in an organization (Barney, 1991). The

TQM entails practices, such as training and development of employees, promoting customer relations, and encouraging effective communication in an organization.

The TQM can contribute to performance improvement by enhancing asset development that is specific, lead to complex social relationships, which support the culture and history of an organization and that can generate knowledge. All these features align with the conditions, which following RBV, provide sustainable competition (Barney, 1991). The TQM can facilitate the start of new routines and habits which encourage process learning leading to experience within the company. Thus, TQM helps in generation of a wealth of competencies in an organization and promote effectiveness and efficiency in the undertaking of different activities in the organization. The activities later result in competitiveness which leads to high performance in an organization. This study examined how some of the TQM practices can be used to create core competencies in OMCs in Kenya and enable them to improve their operational performance.

The EFQM model provides a framework that determines and shows an organization their current excellence level and the improvements needed to be made to reach the highest performance. The model ensures that stakeholders and their needs are incorporated in business decisions which have to mirror organizational objectives. This model is a common reference as it provides tools for improvement of performance used to sustain a business and make it successful. The model is reassessed often to incorporate new concepts, ideologies, and approaches to learning. The three components of the model are eight core values that facilitate sustainable performance, nine criteria divided by five enablers and the

Results, Approaches, Deploy, Assess and Refine (RADAR) logic. The eight core values are core principles of management that ensure sustainable performance and they include; customer value addition, sustainable development of the future, developing capabilities of the organization, encouraging innovation and creativity, progressing with vision, inspiration and integrity, active management, encouraging people talents, and sustaining outstanding results. The nine criteria are divided into five "enablers" (people; partnership; strategy; leadership and resources; and services, products and processes) and four "results" (people, society, customers, and business results). The RADAR logic, is a continuous advancement cycle used by EFQM, and was initially obtained from the Plan Do Check Act (PDCA) cycle and they include results aimed as part of the strategy, approaches to ensure attainment of the required outcome, deploying the approaches systematically, assessment and refining the approaches based on results assessment and analyzing and ongoing learning.

The study also applied the EFQM model, which allows the operational performance of an organization to be measured on the basis of all or each of its criteria. That is the people; partnership; strategy; leadership and resources; and services, products and processes; society; customers; and business results. This study isolated some of the criterion and studied their impact on the operational performance of OMCs in Kenya, some of the questionnaire items sought to get responses on how these criterion are applied at GEL and their impact on GEL's operational performance.

2.3 Total Quality Management Practices

Of the many TQM practices, this study identified six major practices and the role they play in an organizations operational efficiency. These practices are customer focus, top management commitment, employee involvement; systems approach; process management and teamwork.

The first practice considered was top management commitment. With regards to the important role they play in the implementation of TQM and success of the organization, commitment by top management is viewed as the starting point for quality activities (Hietschold, Reinhardt, & Gurtner, 2014). Deming (1982) stated that the success and maintenance of operational programmes depend on strong leadership commitment. Top managers need to facilitate quality management programmes to ensure effective performance. Implementation of TQM is driven by top management, thus, burdened with the responsibility to offer an appropriate and enabling environment for the implementation of TQM. Top management of a company is responsible for setting goals that are specific, measurable, achievable, realistic and timely, they are also responsible for directing the organization towards enhanced performance. The direction for the attainment of operational goals and objectives is directed by top management. In an operational management system, reliable and relevant environment to facilitate performance is provided by management support. Spencer (1994) recommended that support by top management was critical in improving the overall performance of organizations by creating and communicating a vision that incorporates TQM as an integral part of the organization. The top managers of OMCs need to enhance TQM implementation in order for their companies to have improved performance.

The second practice considered was customer focus. Richards (2012) determined that customer focus was the main factor in TQM, Richards emphasized that the customer defines quality and not the manufacturers because quality is what the end user desires. Customer focus is defined as the degree to which consumer expectation and satisfaction are met continuously by an organization (Zhang, 2000). Customer focus is the primary aspect of TQM (Bank, 2000). It involves the achievement of long-term objectives of an organization (Mahmoud & Carlos, 2010). An organization should work towards implementing TQM in the best way to ensure high performance. Customer attention facilitates high performance through the increased satisfaction of customers. The two kinds of customers are external and internal customers. The internal customers are found within the organization, the employees working in the same firm to deliver products and services. The external customers are individuals or organizations that hire or buy products and/or services from the organization in exchange for money or other considerations. The implementation process of customer focus at GEL involved having the customer in mind at all levels of decision making and policy formulation by the company as well as incorporating their feedback in the daily running of the firm. This made the company have repeat customers and effectively have improved operational performance.

The third practice considered was employee involvement. Employees are crucial to maintaining and improving the productivity and performance of an organization. Thus, organizations need to value and respect staff members since they are company assets that are expensive to lose. Top managers should “hire people who are smarter than them, and

believe that they are" (Ma, 2017). They should also be given freedom to effectively use their knowledge, abilities, and skills to facilitate long-term productivity. According to Prajogo and Sohal (2001), a TQM implementation process should include employees thus resulting in high improvement in performance of operations. Markey (2006) argued that training employees and making them participate in decision-making processes significantly improves their performance and hence the organization's increased ability to meet its objectives. The research sought to establish the level of involvement of GEL employees in making decisions as concerns quality at the firm and relate it to the company's operational performance.

The fourth practice the study considered was systems approach to quality. Quality is an important and challenging component of an organizational strategy. Companies strive to improve quality while customers look for good quality thus, quality can totally change the market. Quality is the key element of satisfying customers, improving profitability of the organization and achieving economic advancement of a country (Golder, Mitra, & Moorman, 2012). Over the past 30 years, TQM has evolved in business practices through inculcating programmes like six sigma and Baldridge awards. These programmes have been observed to strive to achieve quality, especially in manufactured products (Deming, 1986; Powell, 1995).

The QMS is an official system that involves documentation of approaches, procedures, and processes to attain quality policies and goals. The QMS promotes continuous effectiveness and efficiency by guiding the activities of an organization to meet customer expectations

and legal requirements. The ISO 9001:2015 implemented by GEL specifies the requirement of QMS since it is an international standard. The QMS serves many purposes including improvement of processes, reduction of waste, cost minimization, identification and development of training opportunities, engagement of staff and setting of the organization-wide direction. Implementation of quality systems helps organizations to document all their quality procedures thus achieving improved operational performance. The GEL has a quality management manual which has been modeled according to the ISO 9001:2015 international standards requirements, all members of staff are required to observe the requirements of the manual.

The fifth practice considered was process management. Process management is the behavioral methods that focus more on the actual activities of an organization in comparison to the achievement of results (Ibrahim, Amer, & Omar, 2011). Kanji and Asher (1993) reveal that in organizations that implement TQM, their attention is not on official set systems and procedures rather, attention is put on teams able to solve the problems in the organization to meet objectives. TQM focusses on aligning the responsibilities of employees with the processes of an organization. Organizational success is attributed to the actions and activities implemented rather than the abstract issues. Process management involves proactive and preventive approaches that ensure quality management. These approaches include stability in development of schedules and distribution of work, thus reducing variation by improving the product quality in the stages of production (Kaynak, 2003). The study sought to know whether GEL service stations have a uniform service

charter and whether they have standardized schedules in their operations. It shall also seek to establish the impact of process management in operational performance.

The last practice considered was teamwork. According to Doorewaard & Hootegm (2002), teamwork is a process that leads to fulfilment of employee's need for control over their work environment. Teamwork is vital for organizational success; it leads to organizational activities that incorporate goals and mission, promotes innovation, facilitates communication, develops faith between stakeholders and facilitates employee empowerment (Griffin, Patterson, & West, 2001). Retaining competitive advantage during difficulties caused by international marketplaces and also numerous world activities was deduced to be mainly achievable through teamwork (Salas, Cooke, & Groman, 2010). Teamwork and empowerment enhance commitment to quality and it is defined as, giving employees mandate to come up with their own decision based on what they consider to be right for them, have control on their taste, take a risk and consider mistake as part of learning and encourage changes (Evans & Lindsay, 2008). If employees in OMCs work in dynamic teams, then they will reap the benefits of improved morale hence achieving better operational performance.

2.4 Operational Performance

Operational performance refers to the measurement of the actual outputs of a firm in relation to the set goals and expectations (Richard et al, 2009). Operational performance therefore takes into consideration the company's performance in achieving its basic objectives (Russell & Taylor, 2008). Improved operational performance is anticipated to

promote an organization's competitive edge, through price/cost, quality, reliability, marketing time, output innovation, customer lead times and inventory levels.

Neely (2007) states that organizations should start placing value on effectiveness and efficiency of actions. This can be expressed both qualitatively and quantitatively. According to him, performance is closely related to efficiency and effectiveness. For any organization to compete well in the market it has to produce the right products and services using minimal inputs, this is why firms need to embrace the idea of TQM in all their operations in order to have a strong operational performance. Firm operational performance and improvement as pointed out by Mahmoud and Carlos (2010) can be accomplished by building a strong culture around operational excellence, training and equipping the workforce on the techniques and tools of process improvement, deploying real-time visibility process management technology and putting in place appropriate measures as well as controls. This study narrowed down the operational performance of OMCs to two indicators: customer satisfaction and employee morale.

Employees are the main asset in any company, their role in achieving a company's success cannot be ignored. Therefore, it is necessary to equip them through essential training in order to improve their morale and enable them to achieve maximum work performance. Herbert, John and Lee (2000) described employee performance as the result or contribution of employees geared towards enabling them attain their specific goals. This performance can be manifested in production improvement, ease of using new technology and motivated

employees. Employee morale is important because motivated employees will ensure that they give the best service to the customers.

Employee morale comes about because of a combination of several factors, Mullins (2006) identifies motivation as a key ingredient in employee productivity and performance. Motivated employees were ready and willing to put effort in their work in order to achieve a stated goal. The second important aspect of employee morale is organizational culture, as it enables the employees to have a better understanding of the history of the organization and its current methods of operations (Bulach, Lunenburg, & Potter, 2012). It also fosters commitment to the firm's philosophy, tradition and values. Organizational commitment is also an important aspect in employee, a committed employee will have increased effort at his work. Other indicators of employee morale include, a conducive workplace environment, a top management which listens to and addresses the plights of the employees and proper compensation of employees for work done. The TQM is mainly interested in ensuring quality in all service provisions, hence if employees have morale for their work, then they will provide the best service offering ensuring that there are repeat customers.

Customer satisfaction is a good indicator of a firm's operational performance as satisfied customers will make repeat sales hence increasing a firm's profitability and market share (Cronin & Morris, 1989). The TQM is important in enhancing customer loyalty through satisfaction which has the potential to create repurchases and attract new customers through referrals. As a measure of operational performance, customer satisfaction is an indicator of product performance as relates to a set of customer requirements. An organizations profits

and revenues are as a result of meeting and exceeding the consumers' needs and expectations.

For manufacturing firms, the operational performance indicators include quality, flexibility, cost, speed and dependability. In their study, Roth and Van der Velde (1991) identified courteous service, consistent service and customer relationship as most critical in enhancing customer satisfaction. Consistent service in operations is closely associated with reliability and dependability. The OMCs need to embrace reliability and dependability in all their operations if they are to have improved operational performance.

2.5 Kenyan Government and the Petroleum Industry

Given that the oligopolistic structure of the petroleum industry could facilitate cartelization, it can be assumed that the oil companies behave like a cartel (Government of Kenya, 2005). This notion has made the petroleum industry in Kenya to be highly regulated. The industry is comprised of a number of institutions (Kieyah, 2011). The Ministry of Energy is responsible for managing the energy resources in Kenya, it has an established open tender system, where interested oil marketers bid to import petroleum products on behalf of the others, and the winner allocates the other marketers refined products based on the calculated cargo participation.

There are a number of state corporations under the ministry which are tasked with daily operations and general oversight of the energy sector. The ERC has the responsibility of regulating the price of petroleum products in the country, it does this through setting the maximum pump prices monthly, determining the quota which each oil marketing firm will

receive in the market, floating tenders for the purchase of petroleum products and ensuring that there is no fuel adulteration by conducting random monthly fuel intelligence surveys on petroleum service stations across the country. The KPC is tasked with the responsibility of receiving the petroleum products from the Port of Mombasa and supplying them through the pipeline to various towns in Kenya, which have the connectivity of the pipeline. The KRA monitors the distribution and ensures that all taxes are duly paid for before the sales. The PIEA provides training and industry statics in the oil industry.

Since early 2000, the petroleum industry has been adversely influenced by several factors both locally and globally. The liberalization of the petroleum sector in the year 1994, allowed smaller companies to open retail fuelling stations and mini depots, as well as allowing them to open mini depots as independent OMCs. This influenced competition forces in the industry environment leading to consumers getting better prices. A vast majority of these companies have not established standardized organizations and therefore they lack operational ethics leading to many of them engaging in fuel adulteration and other unethical practices (Gichuru, 2013). The ERC, KEBS and KRA have made attempts to fight the adulteration menace in the petroleum industry by organizing joint random fuel intelligence monitoring, popularly known as "petroleum raids" but have not achieved much success. The Kenyan government through the ministry of finance, in the finance bill 2018 introduced the anti-adulteration levy on kerosene making the price of kerosene and diesel to be equal in order to eliminate adulteration. Given the amount of regulation of this industry, the role of the government in moderating this industry cannot be assumed.

2.6 Challenges to Total Quality Management Implementation

Quality management practices implementation faces various challenges. These challenges hinder the successful implementation of TQM making it difficult to offer quality goods and services to all stakeholders including final consumers. A good knowledge of the factors likely to hinder the proper implementation of TQM gives managers the opportunity to establish strategies that are effective to improve the deployment of TQM, thus, promote business success (Jacobsen, 2008). Several studies have been conducted which reveal the several factors that are barriers to successful implementation of TQM.

According to Sebastianelli & Tamimi (2003), the five factors hindering the implementation of TQM are lack of adequate planning; inadequate human resource advancement; lack of proper planning; lack of leadership in developing a quality culture; inadequate resources; and little focus on customer orientation and satisfaction. In their study on identifying the most feasible barriers to TQM implementation, Whalen and Rahim (1994), observed lack of planning, lack of commitment by top management, strength of labor, lack of training and development, a complacent team, implementation of obsolete programmes, insufficient resources, difficulty in changing the culture of an organization, and inadequate measures of quality as the major challenges in TQM implementation. This study considered the challenges faced in TQM implementation at GEL. Part C of the questionnaire elicited responses on the challenges faced on TQM implementation at GEL.

2.7 Empirical Review

The theory and review of literature indicate that immense study has been done on TQM and specifically on its contribution towards operational efficiency. Several theories and empirical researches provided an available set of information on the subject and TQM as a tool towards achieving operational efficiency. However, the influence of TQM tendencies on operational efficiencies has not specifically been researched on to indicate the contribution of each specific variable in quality performance of a company.

Sulaksono et al. (2017) conducted an analysis of TQM on the competitive performance in Indonesian petroleum processing firms, the research was aimed to establishing the link between oil and gas industry performance and TQM in Indonesia. The study adopted a descriptive research survey and inferential statistics to analyze data, questionnaires facilitated primary data collection. The study established a compelling relationship between competitive performance and TQM, though not all elements of TQM had proven to have an effect on competitive performance. Their study narrowed only on competitive performance and seemed to narrow down on leadership ignoring the role of other members of the company.

Aletaiby et al. (2017) undertook a study to determine factors that promote success of TQM in the oil industry of Iraq. The study was directed by the main aim of establishing a framework that would influence Iraq oil industry performance positively, by implementing factors that ensure TQM success and they used extensive literature review on existing literature on TQM in the oil industry in Iraq. The research suggested a framework, which included nine factors that ensure TQM success and their influence on employees'

performance. The key success factors were customer focus, continuous improvement, development and training, quality-oriented culture, process management, communication, empowerment and involvement and Quality management practices. They however, were not able to link these success factors to employee performance.

Al-Khalifa and Aspinawall (2000) conducted a study on the establishment of TQM in Qatar, where they assessed the awareness, with regards to the process and justification for ISO 9000 implementation and TQM, and TQM related activities in Qatar. They adopted a descriptive research survey of 143 firms varying in size and focused on manufacturing, service and public industries. Their primary data was collected via questionnaires. The study concluded that TQM understanding was low and the main factors of TQM were not often practiced. The focus of the period of research was on ISO 9000 certification.

A study on the effect of TQM on the productivity of firms in Jordan Oil and Petroleum Company was carried out by Al-Damen (2017). The objective was to determine the effect of the implementation of TQM on the performance of Jordan Oil Petroleum Company. The study targeted managers occupying different levels in organizations. The sample population was 103 managers. He gathered both secondary and primary data. Administered questionnaires were used to gather primary data. He found out that TQM influenced the performance of an organization positively, and the TQM implementation had an impact on employee satisfaction and operational efficiency. The study however, did not look at the effect of TQM implementation on customers and suppliers. Sadabad, & Pathirage (2017) conducted a critical review on the urgency for a quality-oriented culture in the oil and gas

projects in Iran. The research followed the set goal to find out the influence of the quality-oriented culture of projects related to oil and gas in Iran. They adopted a qualitative content analysis of available secondary data on Iran's oil and gas projects. The study established a need for project managers to enhance a quality-oriented culture in the gas and oil projects in Iran. The study was limited to oil and gas projects and did not cover the entire petroleum industry.

Locally, Munyao (2014) studied the effects on operational performance by firms distributing petroleum in Kenya as a result of service quality management implementation. The main aim of the research was determining the extent of acceptance of service quality management practices in Petroleum distributing firms in Kenya and the challenges faced during implementation. A descriptive study including 32 firms in Kenya distributing petroleum was used, primary data was gathered by use of questionnaires, and data was analyzed through descriptive statistics and regression analysis. The study found out that the petroleum distributing companies adopted various service quality management practices to a large extent. It also identified a lack of visionary leadership and top management support as the biggest challenges in service quality management practices. Cross-sectional survey influenced the effectiveness and accuracy of the study.

Kungu (2010) undertook a study on the implementation of ISO 9001:2008 QMS by Total Kenya Limited and focused to identify quality practices and the factors that influence ISO 9001:2008 implementation in the company. A case study of the Total Kenya Limited was the research design of choice. Interviews were administered to get detailed content from

the ISO team and analysis of the gathered data was conducted using content analysis. The study concluded that there was a high awareness of ISO 9001:2008 QMS adopted in the organization. The QMS in the company was functioning appropriately and achieving quality products and services that satisfied the customers. The study, however, failed to link the implementation of ISO 9001:2008 to the operational performance of Total Kenya Limited.

Wambugu (2015) in his study, TQM and operational performance of Central Glass Industries Limited (CGIL), set to determine TQM practices adopted by CGIL and their impact on operational performance. He further worked on identifying the gaps in the effective execution of TQM and the challenges that follow. The study adopted a descriptive research survey and multiple regression analysis to analyze data. Primary data was gathered through the use of administered questionnaires while secondary data was obtained from the company's resource center. The study found out that focus on the customers, support by top management, and strategic quality planning were the top TQM practices employed by the firm. The study established a strong positive link between customer focus, employee involvement and process approach to operational performance. The study, however, was conducted during a period when the industry was undergoing an ownership transition, therefore the employees were uncertain of their future when answering questionnaires and this might have affected the validity of results.

Omar (2017) studied the influence of TQM practices on operational efficiency of container depots in Mombasa County with an objective of establishing the effect of TQM on

operational efficiency of container depots in Mombasa. The study adopted a descriptive design using cross-sectional data. A census survey was undertaken on all container depots. Primary data was collected via questionnaires. The study revealed that Quality management practices, training, teamwork, employee commitment, customer focus and quality focus had a significant relationship with operational efficiency. The study did not, however, look at the role of moderating variables like government policies and environmental impact on TQM.

Nyamari (2017), in his study on the impacts of TQM implementation of commercial banks in Mombasa County on operational performance, researched to determine the impact of TQM on operational efficiency of banks in Mombasa County. The research adopted a cross-sectional descriptive survey design and did descriptive statistics and correlation analysis. The outcome from the study concluded that the five TQM practices had an important relationship on operational performance. The study however, failed to use quantitative data to compare the performance of the banks which practiced TQM to those, which did not practice TQM.

2.8 Summary of Empirical Review

Different scholars have studied links between performance and TQM and realized different outcomes. Different production types are utilized in investigating the above relationship including innovative, financial and operational performance. Operational performance results in positive and stable relations, but there are other types that show inconsistent results. Organizations that have implemented TQM prove of its significance in promoting operational performance. The TQM forms the fundamental principle for success in an

environment that is competitive. Different firms use TQM as a tool for increasing their business profile and consider the proposed strategy to ensure competitive advantage. The cost of production, delivery of end products, production time, and product/service quality are all strong indicators of operational performance.

Table 2.1 Summary of Empirical Review

Author(s)	Study Topic	Objectives	Research Methodology	Findings	Knowledge Gap(s)	Focus on Current Study
Sulaksono, Wibowo and Febri (2017)	Analysis of TQM implementation on competitive performance of oil and gas industry	Determine the link between TQM and competitive performance in the oil and gas industry in Indonesia	Descriptive research survey and questionnaires were used to collect primary data	Exists an essential link between TQM and competitive performance, though not all components of TQM proved to have an impact on competitive performance	Never considered the effect of TQM on operational performance	Effect of TQM on operational performance
Aletaiby, Kulatunga, and Pathirage (2017)	Key success factors of TQM and employees performance in Iraqi oil industry	Establish a conceptual framework to better performance by employees in the oil industry in Iraq by adopting the factors that ensure TQM success	Used extensive literature review on existing literature n TQM	Suggested the use of nine factors to ensure TQM success and their effect on employee performance	Only depended on secondary data	Incorporate both secondary and primary data
Khalifa, and Elaine (2000)	The development of TQM in Qatar	evaluate the appreciation, knowledge, development of, and rationale for the execution of ISO 9000 and TQM, and the understanding and exercise of TQM related tasks	Descriptive research survey and questionnaires were used to collect primary data	Knowledge of TQM was found to be very low and the main TQM success factors were not well understood and exercised.	Did not consider the impact of TQM on operational performance	Consider the effect of TQM on operational performance

Table 2.1: continued

Al-Damen (2017)	The effect of TQM on operational performance. Case of Jordan Oil Petroleum Company	Examine the impact of TQM implementation on performance in Jordan Oil Petroleum Company	Descriptive research survey and primary data collected by use of questionnaires.	TQM affects performance of organizations positively.	Did not consider the various aspects of TQM and their relationship to TQM	Looks at the effect of TQM on operational performance
Maleki and Pathirage (2017)	The need for quality-oriented culture in Iran's oil and gas projects: a critical review	Effect of quality-oriented culture in the oil and gas projects in Iraq.	Qualitative content analysis on secondary data	Established a need for project managers to enhance a quality oriented culture in the oil and gas projects in Iran	Considered gas and oil projects and did not look at the retail part of oil and gas	Considers the petroleum industry in general
Munyao (2014)	Effect of service quality management on operational performance of petroleum distributing firms in Kenya	Establish the degree of embrace of TQM practices in petroleum distributing companies in Kenya, the challenges they face and the effect of these practices on the firms' operational performance	Descriptive survey covering 32 firms and data was collected by use of questionnaires	Identified lack of visionary leadership and top management support as the biggest challenges in service quality management practices	Conducted a case study on only one firm	
Kungu (2010)	Implementation of ISO 9001:2008 QMS at Total Kenya Limited	Establish factors that influence the adoption of ISO 9001:2008 in Total Kenya Limited and establish the quality practices in the company	Case study and content analysis	Awareness of ISO 9001:2008 QMS was very high and QMS was achieving product and service quality that met customer requirement	Limited to ISO 9001:2008 implementation and did not look at quality in totality	Looks at TQM instead of the ISO 9001 certification alone

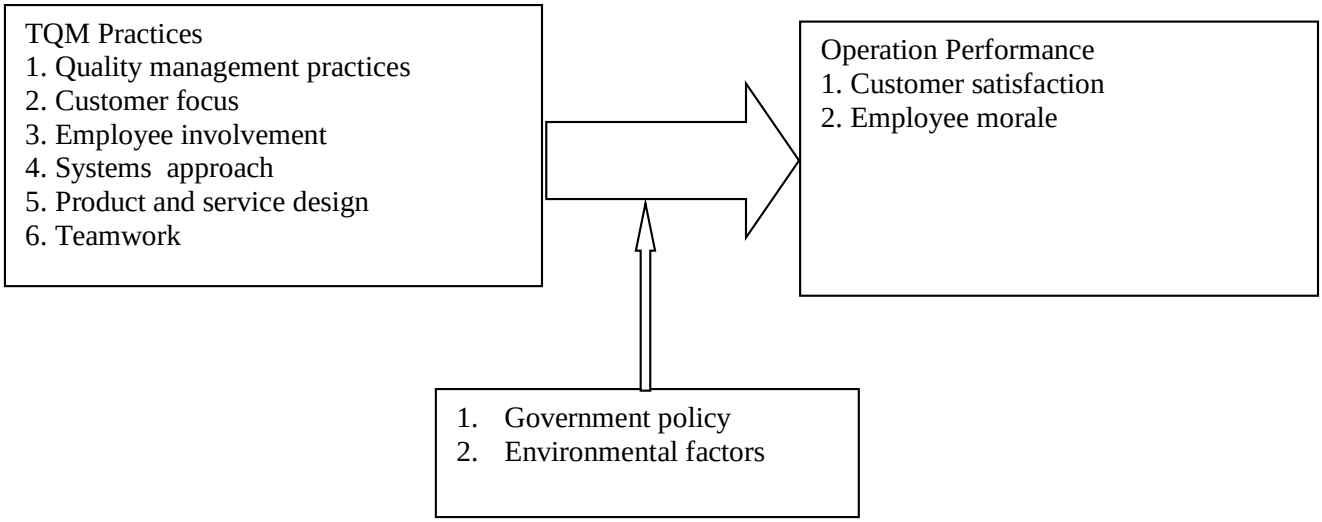
Table 2.1: continued

Wambugu (2015)	TQM and operational performance of CGIL	Determine TQM practices adopted by CGIL and their impact on operational performance. Identify the gaps to effective TQM implementation.	Descriptive research survey and data was collected by use of questionnaires while secondary data was got from company's resource center	Customer focus, top management support and strategic quality planning were the top practices adopted at the industry and there was a strong positive link between customer focus, employee involvement and process approach to operational performance	Conducted when the industry was on ownership transition, hence the results could not be fully applicable as employees were not certain of their future	GEL was already having a stable management and the results was not expected to vary much
Omar (2017)	Effect of TQM practices on operational efficiency of container depots in Mombasa County	Establish the effect of TQM on operational efficiency of container depots in Mombasa County	Descriptive design using cross sectional data and census survey. Primary data was collected by use of questionnaires	Established that Quality management practices, training, teamwork, employee commitment, customer focus and quality focus had a significant relationship with operational efficiency.	Did not look at the role of moderating variables like government policies and environmental impact on TQM	Looks at the moderating role of government and the effect of external environment on TQM implementation
Nyamari (2017)	Effect of TQM practices on operational performance of commercial banks in Mombasa County	Find out the effect of TQM on operational efficiency of banks in Mombasa County	Cross sectional descriptive survey design	All the five TQM practices had a significant relationship to operational performance	Did not use quantitative data to compare the performance of the banks which practiced TQM to those which did not practice TQM	Compared GEL performance since inception to see whether introduction of TQM has been beneficial to its performance

2.9 Conceptual Framework

The conceptual framework for the study is summarized in figure 2.1 below.

Independent Variable Dependent Variable



Moderating Variable

Source: Researcher 2018

Figure 2.1 Conceptual Framework

The study looked at the effect of various TQM practices on the operational performance of GEL. The TQM practices formed the independent variables of this study and they include Quality management practices; customer focus; employee involvement; quality systems; product and service design; and teamwork. The major indicators of operational performance that this study focused on are customer complaints and employee morale. The study also investigated the role of government legislation and environment factors in moderating the operational performance of GEL

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This section covers the research methodology and outlines the research design, population of study, research instruments, procedures for data collection, reliability and validity tests, and data analysis techniques that was used to answer the research question. In addition, it looks into the ethical considerations

3.2 Research Design

Research design forms a framework in which data was collected suitable to achieve the stated objectives. This study employed a descriptive case survey research design in order to provide a deeper understanding regarding the impact of TQM practices on operational performance at GEL. The use of case study approach was preferred since it gives an in-depth focus on the case under study allowing the examination of the effects of TQM implementation in GEL.

3.3 Population

The target population for this study was all the 38 station managers of GEL service stations across the country. A list of all the stations is attached (see Appendix IV). Because of the low number of respondents targeted, the study was a census survey on all the station managers for the 38 GEL service stations countrywide. The manager in charge of quality, safety, and environment at GEL were also targeted as well as the terminal manager for GEL depot in Nairobi.

3.4 Operationalization of the Variables

The Table 3.1 below gives a synopsis of how the variables in this study were operationalized.

Table 3.1 Operationalization of the Variables

Variable	Operational Indicators	Type of Data	Measurement
TQM practices (independent)	• Top Management commitment • Customer focus • Employee involvement • Systems approach • Process management • Teamwork	Ordinal	Likert scale
External environment (moderating)	• Government policy • Environmental factors	Ordinal scale	Likert scale
Operational performance (dependent)	• Customer satisfaction • Employee morale	Ordinal scale	Likert scale

Sources: Author (2018)

3.5 Data Collection

This study collected both primary and secondary data. The primary data was gathered by the use of a questionnaire, while the secondary data was gathered from policy documents and manuals within the company. The questionnaire was structured in that it had closed ended questions intended to elicit quantitative data for statistical analysis.

The questionnaire consisted of four sections that were based on the study objectives; the first section was used to collect the demographic and the respondent's profile, the second section collected information on TQM practices practiced within GEL, the third section was used to get information on how government legislation affects operational performance in GEL, the fourth section identifies the challenges faced in TQM implementation and the fifth section was used to gather data on the effect of implementation of TQM practices. The questionnaire targeted all the station managers of

GEL service stations because they are the ones in charge of daily operations in their various stations and are privy to the information being sought. The manager for quality, safety and environment at GEL as well as the terminal manager for GEL depot in Nairobi were also targeted to give an organization wide view on TQM.

3.6 Reliability and Validity Tests

Before data collection, a pilot test was done to examine if the instrument was valid and reliable. The pilot test entailed a phase in which the research instruments was circulated to some staff in GEL who were not part of the target population in order to test how reliable and valid they was. Cronbach's alpha was used to test the reliability and consistency of the questionnaire (Cronbach, 1951) and the applicable range was between 0.7 and 0.9.

3.7 Data Analysis

Descriptive statistics was used to analyze data from the various categories while statistical inference was done to ascertain the results of the study. The descriptive statistical tools aided in defining the data and determining the respondents' degree of agreement concerning the varied statements under each factor. Linear regression analysis was used to analyze the data in order to establish whether there exists a relationship between the dependent variable and the independent variables. In this study, Quality management practices; employee involvement; quality systems; product and service design; customer focus; and teamwork was the independent variables while operational performance was the dependent variable. The model was as follows:

$$OP = \beta_0 + \beta_1 TMC + \beta_2 EMP + \beta_3 SA + \beta_4 PM + \beta_5 CF + \beta_6 TW + \varepsilon$$

where OP is operational performance, TMC is top management commitment, EMP is employee involvement, SA is systems approach, PM is process management, CF is customer focus, and TW is teamwork.

Table 3.2 Summary of Objectives, Data to be Collected, Analysis and Interpretations

Objectives	Data to be Collected	Questionnaire Items	Analysis
Determine the extent to which TQM practices are implemented at GEL	Primary and secondary	Part B	Descriptive statistics
Determine the extent to which government legislation affects TQM in GEL	Primary and secondary	Part C	Descriptive statistics
Determine the challenges affecting the implementation of TQM at GEL.	Primary and secondary	Part D	Descriptive statistics
Establish the relationship between TQM implementation and operational performance	Primary and secondary	Part E	Linear regression analysis

Table 3.2 above presents a summary of the objectives of this study, the data to be collected for each objective, the data analysis and the interpretation thereof. Primary and secondary data was collected for all the four objectives, with the first objective, the extent to which TQM practices are implemented at GEL occupying part B of the questionnaire, data collected was analyzed through descriptive statistics. The third objective, determining the extent to which government legislation affects TQM in GEL occupied part C of the questionnaire, and data was analyzed through descriptive statistics. The second objective, determining the challenges affecting the implementation of TQM at GEL occupied part D of the questionnaire, and data was analyzed through descriptive statistics. Lastly, the fourth objective, establishing the relationship between TQM implementation and operational performance occupied part E of the questionnaire, and data was analyzed through linear regression analysis.

3.8 Ethical Considerations

The following moral issues were adhered to all through the research period; - the names and identities of the respondents were not uncovered; the respondents were additionally guaranteed of classification and secrecy; and the examination did not endeavor to see the change fraternity as a static system of progress, but instead as a dynamic structure for TQM that would be helpful in enhancing knowledge in the field of TQM in various companies.

CHAPTER FOUR: ANALYSIS PRESENTATION AND DISCUSSION OF FINDNINGS

4.1 Introduction

This chapter presents the findings of the study and is organized into three sections. Section one, analyses the demographic characteristics of the respondents and also gives the response rate. This section is important as it confirms whether the response rate was adequate. The second section outlines each response and how it helps meet the objective of the study. The third section describes regression analysis and how the hypotheses were tested

4.2 Response Rate

The rate of response was used to determine how well the target sample was accomplished. It was presented as a percentage of the actual number of respondents used in the study against the targeted respondents. Reaction rate is usually lower or equal to the targeted respondents. The more the rate of response the better the sampling frame hence a verifiable sample. This is because rate of response is associated with the sampling frame. A sampling frame is the ratio of a sample size to the size of population. High rates of response reduce chances of obtaining one sided or skewed statistics and as a result, guarantee validity and reliability of study findings Response rate was computed as filled and returned questionnaire divided by administered questionnaire multiplied by 100 and Table 4.1 below presents the rate of response.

Table 4.1 Response Rate

Questionnaires Administered	Filled and Returned Questionnaires	Response Rate (Percent)
38	35	92.1

After data cleaning, screening and verification 35 questionnaires out of the targeted 39 were completed. Using the formula presented above, this was equivalent to 92.1 percent. According to Mugenda & Mugenda (2003), for a good presentation of the target respondents, the preferred rate of response is 70 percent. Evidently, this rate of response was way above the bare minimum of 70 percent. The implication is that the study used clear, precise and acceptable instruments and processes in the data collection exercise. Rogelberg and Stanton (2007) showed that the expected respond rate when cross – sectional studies are carried out at the individual level through survey design, the rate of response anticipated is 50 percent. They also assert that at organizational level, the response rate is usually poor and is most of the time found to be 35-40 percent. Therefore the appropriate response rate for studies carried out at firms is between 35 – 40 percent. .The achieved rate in this study was adequate for analysis and conclusions in line with objectives of the study.

4.3 Reliability Analysis

The research instrument's reliability was established utilizing the size of Cronbach's coefficient alpha. Cronbach Alphas in the investigation for every one of the segment of the instrument are as demonstrated in Table 4.2 below.

Table 4.2 Reliability Tests

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	Items
.936	.935	59

The estimation of Cronbach's alpha for free factors was above 0.936, which implied that the builds were solid for foreseeing operational execution. Essentially, the Cronbach's

Alpha qualities for government involvement and the dependent variable, operational performance, was 0.935. This was an implication that the single elements i were reliable and adequate for testing the indicators.

4.4 Respondents Characteristics

Demographic attributes of the respondents are discussed in this section. The main attributes of the respondents according to the questionnaire were education level and years worked in the company. Demographic attributes of the respondents in terms of the years served in the firm and their level of education were summarized as shown in Tables 4.3 and 4.4, respectively below.

Table 4.3 Level of Education

Certificate	Diploma	Bachelors Degree	Masters	PhD	Others	Total
7	10	16	2	0	0	35
20 percent	28.5 percent	45.7 percent	5.7 percent	0 percent	0 percent	100 percent

Table 4.4 Duration of Services

Less than 2 Years	2 to 6 Years	6 to 10 Years	Above 10 Years	Total
9	15	11	0	35
25.7 percent	42.9 percent	31.4 percent	0 percent	100 percent

Table 4.3 shows that most of the respondents (45.7 percent) were holders of bachelor's degrees in various fields, 28.5 percent were diploma holders, and 20 percent were certificate holders while only 5.7 percent were holders of master's degrees. This is an indication that the oil marketing industry is attracting more university graduates. On the duration of services, results indicates that most of the respondents (42.9 percent) had served for a period of between two to six years, while none had served for a period exceeding 10 years. However, there was an almost equal distribution for those who had served for less

than two years and those who had served for between six to 10 years with frequencies of 25.7 percent and 31.4 percent, respectively.

The period of work at GEL shows that the respondents had studied behaviors and trends of the sector in Kenya and hence they could provide reliable and adequate information regarding TQM and operational performance at GEL. The high percentage (42.9%) that had worked for between 2-6 years further shows that most respondents had better understanding of TQM practices at GEL and could give diagnostic data about execution of their separate stations. The examination focused on station administrators as key respondents in this review.

4.5 Total Quality Management Practices

The TQM practices were investigated using indicators comprising top management commitment, customer focus, employees' involvement, systems approach, process management and teamwork. Each of the indicators were analyzed using descriptive statistics. The descriptive statistics for quality management practices are presented below.

The respondents were requested to give their opinions on each of the indicators representing the research variables; quality management practices (top management commitment, customer focus, employee involvement, systems approach and process management), government involvement, challenges faced in TQM implementation and operational performance of the firm (employee morale and customer satisfaction). Respondents were requested to rate the variables on a scale of one to five, where five represented "strongly agree" and one "strongly disagree". The survey calculated standard

deviation as a measure of dispersion and mean as a measure of central tendency to summarize the attributes of the variables under study.

The first independent variable was top management commitment where respondents were requested to rate their agreement or disagreement on some of the aspects of this variable. Top management commitment was measured using indicators comprising established quality policy, communication of policy, continuous improvements, resource allocation and process integration among other factors. The descriptive statistics of all indicators for top management commitment are as shown in Table 4.5 below.

Table 4.5 Top Management Commitment

Descriptive Statistics					
Top Management Commitment	Sample	Minimum	Maximum	Mean	Standard Deviation
Quality policy	35	1	5	4.17	0.985
Communication	35	1	5	3.71	1.178
Integration	35	2	5	3.89	0.993
Continuous improvement	35	1	5	3.40	1.355
Resources allocation	35	1	5	3.83	1.098
Change management	35	1	5	3.71	1.142
Internal and external customers incorporated	35	1	5	3.57	1.195
Valid N (listwise)	35			3.75	1.135

As shown in Table 4.5 above, the general mean score of 3.75 shows that the respondents concurred that top management commitment had a noteworthy effect to operational execution of oil marketing firms. The overall standard deviation of 1.14 indicated that there was less variation among the respondents that is there was concurrence among respondents that oil showcasing organizations in Kenya exhibit responsibility towards quality making arrangements for their items. The findings of this study support the argument by Awino, Muchara, Ogutu & Oeba (2012) that TQM should be included in any strategic planning approach to management. In this case the fact that management of the oil marketing firms

regularly reviews the customer's product requirements and considers this input in their top management meetings is a good indicator that TQM is considered in these firms.

Customer focus was reviewed as the second TQM aspect in this study. Customer focus was broadly measured in terms of customer involvement/inputs, requirement understanding, customer complaint handling, customer demand, effective complaint handling, ability to meet customers' demands, using complains to improve quality as well as effective determination of risks and opportunities. Descriptive statistics of all indicators of customer focus are summarized Table 4.6 below.

Table 4.6 Customer Focus

Descriptive Statistics					
Customer Focus	Sample	Minimum	Maximum	Mean	Standard Deviation
Customer involvement	35	1	5	3.62	1.303
Requirement understood	35	1	5	3.63	1.060
Customer involvement in design	35	1	5	3.17	1.071
Products meet customer demands	35	1	5	3.74	1.146
Effective complaint handling process	35	2	5	3.71	1.073
Complaints used to improve quality	35	1	5	3.80	1.132
Effective determination of risk and opportunities for growth	35	1	5	3.57	1.065
Valid N (listwise)	35			3.605	1.121

Statistics given in Table 4.6 above reveal that the oil marketing companies mainly focus on their customers as measures of TQM - overall mean (3.70) with small variation (standard deviation = 1.12). Guchu and Mwanaongoro (2012) agree that focusing on customers is a good measures of TQM and when well-practiced and implemented will result in good operational performance. Thus, this study agrees on the same conclusions.

The third TQM aspect to be evaluated was employee involvement. Under employee involvement, the research focused on nine main issues comprising of employees being made to understand that quality is their responsibility, direct involvement of employees, measuring employee satisfaction, receiving feedback from employees, staff training, proper utilization of staff skills, recognition and reward systems, understanding quality statement, and understanding the need for ISO certification. Nine questions were administered as indicators of employee involvement and results presented in Table 4.7 below.

Table 4.7 Employee Involvement

Descriptive Statistics					
Employee Involvement	Sample	Minimum	Maximum	Mean	Standard Deviation
Employees understand that quality is their responsibility	35	1	5	4.00	1.188
Employees involvement	35	1	5	3.37	1.031
Employee satisfaction is measured	35	1	5	3.31	0.963
Employees provided with feedback	35	2	5	3.57	1.037
Employees are well trained	35	1	5	3.57	1.170
Employees skill utilized	35	1	5	3.47	1.212
Criteria for measurement and recognition	35	1	5	3.35	1.125
Employee understand quality statement	35	1	5	3.83	1.071
Employees understand the need for ISO	35	1	5	3.77	1.087
Valid N (listwise)	35			3.58	1.098

From Table 4.7 above, employee understanding that quality is their responsibility had the highest aggregate mean compared to all the other items related to employee involvement. This indicates that the oil marketers value quality more than anything else. In terms of reward systems, the oil marketing firms have internal reward system to encourage employees to ensure quality. Also, respondents concurred that the extent to which employees are recognized for quality improvement, is moderate with a mean of 3.35. In

contrast, the responses showed that systems for measuring employee satisfaction had the lowest ratings, with a mean of 3.31.

The fourth practice considered was process management. The OMCs in Kenya operate in a very complex operational process. Performance of OMCs in Kenya greatly vary. This is despite the fact that they all have similar processes and practices across all firms in the industry. This is mainly due to the variation on the perceptions of managers about various dimensions of the processes. The respondent were asked to rate their employers' response to various aspects of firm processes on a five point Likert scale. They were to indicate the level of disagreement or agreement with each statement regarding process management. The results were summarized as shown in Table 4.8 below.

Table 4.8 Firm Process Management

Descriptive Statistics					
Firm Process Management	Sample	Minimum	Maximum	Mean	Standard Deviation
Processes are well documented	35	1	5	3.97	1.361
Processes are regularly updated	35	1	5	3.77	1.087
Process are periodically reviewed	35	1	5	3.60	1.143
Processes are periodically audited	35	1	5	3.94	1.211
Valid N (listwise)	35			3.82	1.2005

The results in Table 4.8 above show that the overall mean score for the items used to measure firm process management was 3.82 and standard deviation of 1.20. This shows that on average, the respondents agreed to a good extent on the various statements regarding the firm process management. However, the score for process documentation was slightly higher than all the other aspects concerning firm process management.

The results imply that the process management moderately affects the level of the companies' operational performance. Periodic review of processes had the lowest score (mean score = 3.60). However, there was no consistency in the reactions on this rating as clear from the standard deviation, which was not the least contrasted with different pointers of firm process management (standard deviation = 1.14). There was high concentration of individual means within the general mean of all the indicators in spite of these variations. This is a clear sign of the magnitude of the effect of process management on GEL's operational performance. The results concur with the findings by Maull, Brown & Cliffe, (2015) on their research on external environmental. They found out that there exists environmental dynamics that are beyond the control of the firm, but which can either positively or negatively affect operational performance, constitutional reforms, political changes and economic developments. This also supports Ting, Wang, & Wang, (2012) study that found that external environment has a great impact on innovation strategy and performance.

The fifth independent variable was systems approach, an analysis was done on the five indicators of systems approach and the results are presented in table 4.9 below.

Table 4.9 Systems Approach

Descriptive Statistics					
Systems approach	Sample	Minimum	Maximum	Mean	Standard Deviation
Customer requirements are communicated	35	1	5	3.63	1.165
Delivery timelines are adhered to	35	1	5	3.77	1.060
Complains are responded to	35	1	5	3.29	1.296
Customer Input is sought	35	1	5	3.49	1.067
Customer feedback forms are provided	35	1	5	3.80	1.256
Valid N (listwise)	35			**3.60**	**1.169**

From table 4.9 above, the aggregate mean score was 3.60 and the standard deviation was 1.17. The results imply that systems approach affected the level of the companies' operational performance. Response to customer complains had the lowest score (mean score=3.29). Provision of feedback forma had the highest mean score of 3.80.

The sixth independent variable was teamwork and two questions were asked. Analytical data of responses is shown in table 4.10 below.

Table 4.10 Teamwork

Descriptive Statistics					
Teamwork	Sample	Minimum	Maximum	Mean	Standard Deviation
Employees teamwork	35	2	5	3.97	0.857
Team award and reward system	35	2	5	3.86	0.974
Valid N (listwise)	35			3.915	0.9155

Table 4.10 above shows that teamwork had the highest mean rating of 3.92. This implied that teamwork was the most common TQM practice among oil marketing firms in Kenya. Teamwork is widely practiced across all fuel stations and is seen as a key component of TQM.

As the mediating variable, government involvement was tested using four measures. The means and standard deviations are summarized as shown in Table 4.11 below.

Table 4.11 Government Involvement

Descriptive Statistics					
Government Involvement	Sample	Minimum	Maximum	Mean	Standard Deviation
Uniformity of prices leads to better performance	35	1	5	3.34	1.282
Raids by KEBS led to improved quality	35	1	2	4.46	3.128
Government inspection of safety helps improve quality	35	1	5	4.00	1.057
Government role in fighting adulteration has led to better performance	35	2	5	3.94	0.998
Valid N (listwise)	35			3.935	1.616

The mean of the items used to measure government involvement was M= 3.94 and standard deviation SD = 1.62. The aggregate score on government push for uniformity of prices was mean = 3.34; standard deviation = 1.28. In terms of regular raids by KEBS and ERC mean was 4.46 and standard deviation of 3.13. In terms of government inspection of safety (mean = 4.00 and standard deviation = 1.06 and finally in terms of government fight against adulteration mean = 3.94 and standard deviation = 1.00. The lowest score was, however observed when more of the respondents were neutral on the issues of uniformity of prices as advocated for by the government.

These results indicates that on average, the respondents agreed to large extent on the various statements as to whether the companies had government involvement. However, the score for regular raids by KEBS was slightly higher than all the other aspects concerning government involvement. Also, the standard deviation indicated that the responses had less variation. It can also be seen from Table 4.10 over that the mean reactions for every one of the markers are grouped around the general mean of 3.94 and standard deviation of 1.62. The outcomes suggest that a large portion of the organizations overviewed were committed towards creating and executing policies that enhance

government inclusion. The outcomes are in accordance with the discoveries of Nilsson, Johnson and Gustafsson (2011) who reasoned that the associations that have a decent quality establishment are in a superior position to accomplish full compliance with government regulations and thus realize improved operational performance.

4.6 Challenges Affecting Implementation of Total Quality Management

This study also set out to determine the challenges affecting the implementation of TQM at GEL. Seven indicators in form of Likert type questions were used and comprised of inadequacy of resources, lack of quality planning, lack of top management commitment, insufficient training, inability to change culture, lack of customer orientation, and poor networks of communication among employees. Table 4.12 below summarizes the responses.

The respondents were divided on the challenges affecting implementation of TQM and they had varied opinions especially on the challenges of lack of quality planning and poor network among employees as shown by low mean values. However there was a common trend among the other challenges, which include inadequate resources, lack of top management commitment, insufficient training, inability to change culture, and lack of customer orientation as shown by high mean values. This implied that, on average the respondents moderately agreed on the various statements that they are faced with certain challenges, which affect the execution of TQM practices. The findings are in agreement with the conclusions made by Tan, Chin & Abdul (2008) that operational challenges directly affect the implementation of TQM in most firms in the oil and gas exploration industry.

Table 4.12 Challenges Affecting Implementation of Total Quality Management

Descriptive Statistics					
Challenges	Sample	Minimum	Maximum	Mean	Standard Deviation
Inadequate resources	35	1	5	3.34	1.187
Lack of quality planning	35	1	5	2.88	1.166
Lack of top management commitment	35	1	2	3.66	3.334
Insufficient training	35	1	5	3.00	1.393
Inability to change culture	35	1	5	3.31	1.345
Lack of customer orientation	35	1	5	3.03	1.224
Poor network among employees	35	1	5	2.77	1.285
Valid N (listwise)	35			3.14	1.562

4.7 Operational Performance

Firm performance was measured using two main indicators, which were employee morale and customer satisfaction. As shown in Table 4.12 below, every one of the pointers had in excess of one thing. Respondents were asked the degree to which worker inspiration and consumer loyalty have affected the organization's operational execution through the previously mentioned pointers. Midpoints of the scores and standard deviation in every marker were figured and condensed as shown in Table 4.13.

Table 4.13 Operational Performance

Descriptive Statistics					
Operational Performance	Sample	Minimum	Maximum	Mean	Standard Deviation
Employee morale	35	2	5	3.57	0.608
Customer satisfaction	35	2	5	3.69	0.796
Valid N (listwise)	35				

Results in table 4.13 demonstrates that appropriation of different TQM practices has had a relatively equivalent effect on operational performance of GEL. This can be seen from the table data which are relatively equivalent. In view of the appraisals on the survey

(Appendix II), the synopsis in table 4.13 demonstrates that the degree of employee morale and consumer satisfaction were huge. This was additionally confirmed with the reliably high mean of 4 (adjusted off). The low standard deviation in this factors, contrasted with recently examined factors, demonstrates that reception of TQM practices at various dimensions of performance is unique. This clarifies why some Gulf stations perform superior to others in spite of being in a similar situation and focusing on a similar market.

4.8 Relationship between Total Quality Management and Operational Performance

Regression analysis was done on the dependent and independent variables to establish the relationship between operational performance and the independent variables of best administration duty, client center, representative inclusion, frameworks approach, process the board and collaboration. The relapse demonstrate synopsis and coefficients are appeared in Tables 4.14 and 4.15 beneath. The outcomes demonstrate that top administration responsibility, client center, worker association, frameworks approach, process the executives and collaboration clarify 69.8 percent (see Table 4.14) of the aggregate varieties in firm operational execution ($R^2 = 0.698$). The remaining 30.2 percent of the aggregate variety in firm execution are clarified by different variables excluded in the model. The accompanying factors top administration commitment, client focus, and teamkwork were noteworthy (see Table 4.15) since p – value was not exactly alpha estimation of 0.05. In this manner, the model that gives the huge impact of on operational execution can be communicated as OP = - 0.283TMC + 0.506CF + 0.244TW.

Table 4.14 Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.836[a]	.698	.634	.410
a. Predictors: (Constant), Teamwork, Systems Approach, Customer Focus, Process Management, Top management practices, Employee Involvement				

Table 4.15 Regression Coefficients

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.061	.550		0.111	.912
	Top management practices	-.283	.140	-.341	-2.022	.050
	Customer Focus	.506	.145	.546	3.481	.002
	Employee Involvement	.251	.157	.274	1.595	.122
	Systems Approach	.224	.154	.269	1.452	.158
	Process Management	.064	.107	.090	0.600	.553
	Teamwork	.244	.123	.228	1.989	.050
a. Dependent Variable: Operational Performance						

As shown in the above model, GEL operational performance is negatively affected by top management practices, and positively affected by customer focus and teamwork. For marginal change in top management practices, operational performance will decrease by 0.283 units whereas for unit increase in customer focus and teamwork, operational performance will increase by 0.506 and 0.244, respectively. This finding concurs with the findings of Munyao (2014), that customer focus and teamwork are the key facets of quality management in the petroleum and gas industry.

CHAPTER FIVE: SUMMARY CONCLUSION AND RECOMENDATIONS

5.1 Introduction

This chapter contains the conclusion and summary comments of the study. The summary, conclusion and recommendations are based on the objectives of the study. The study sought to find out TQM practices adopted by oil marketing firms in Kenya and the extent to which the adopted practices impacted on operational performance of these firms. In addition, this chapter provides a direction for further studies.

5.2 Summary

The purpose of this study was to establish TQM practices adopted by oil marketing firms in Kenya and establish the extent to the adopted TQM practices impact on the operational performance of the firms. The study targeted 38 GEL station managers and questionnaires were submitted to the respondents who were asked to rate on a Likert scale the extent to which their stations adopted TQM practices and the impact on operational performance. The findings indicated that top management commitment, customer focus, employee involvement, systems approach, process management and teamwork explain up to 69.8 percent of the total variations in firm operational performance. It was established that most of the respondents were bachelor degree holders and most of them had been employed in their respective stations long enough to understand the TQM practices adopted by the stations and the performance of the firm as well.

The research findings indicate that top management commitment, customer focus, employee involvement, systems approach, process management and teamwork are some

of the most common TQM practices at the fuel stations. The adoption of these practices was found to impact on operational performance though none was found to impact on performance to a large extent but from moderate to small. Government involvement was found to influence the level of operational performance moderately. A few challenges were also established to have affected operational performance. Some of the challenges cited include inadequacy of resources, lack of quality planning, lack of top management commitment, insufficient training, inability to change culture, lack of customer orientation, and poor networks of communication among employees.

Teamwork was also found to positively influence operational performance to a larger extent, more than the other TQM practices. In summary, TQM practices improve operational performance in the oil marketing companies and more firms are encouraged to adopt these practices in order to improve their performance.

5.3 Conclusion

Oil marketing firms consider quality a precedent to customer satisfaction. Satisfied customers return to the station and recommend it to others hence increased competitiveness which translates to profitability (Kotler 2010). In spite of the advancement of execution estimation frameworks in the oil showcasing industry, Atkinson and Brander-Brown (2001) have indicated the hesitance of the oil and gas industry to utilize quality measures and depend exclusively on financial measures. It was seen from the study that teamwork as the only practice adopted to a large extent. Oil marketing firms should adopt more TQM practices and to a larger extent in order to ensure satisfied customers and to improve performance.

5.4 Recommendations

It was established from the study that the six TQM practices commitment of top management, focusing on customer requirements, involvement of employees, systems approach, process management and teamwork lead to improved operational performance of oil marketing firms. However, they are not extensive and effectively applied in all stations as would have been expected. Furthermore, these are not the only TQM practices that can be applied and other practices should also be adopted. This study, therefore recommends that more TQM practices should be adopted and applied. Parasuraman, Zeithaml, and Berry (1985), recommends that quality and its measurements are among the imperative elements affecting consumer loyalty. Accomplishment of value in items and administrations has turned into a critical concern and therefore extensive exploration of TQM practices other than these six is necessary to ensure that customer expectations are not only met but also exceeded.

5.5 Limitations of Study

Lack of a proper communication system was a great challenge during data collection. Some respondents were afraid of accepting the questionnaire for fear of losing their jobs just in case the management was not happy about it. The management was also afraid that the staff at the stations were not competent enough to respond to question regarding quality management. The industry case study surveyed represents oil marketing firms in Kenya, therefore the study may not be generalized outside the oil and gas industry in Kenya. The selected respondents who were managers in the fuel stations are usually very busy and therefore some found it difficult to find time in their busy schedules in order to fill in the questionnaires. This obstacle was however overcome by giving the respondents the

questionnaires and agreeing to their time frame request to fill the questionnaires. Not all questionnaires were returned leading to a response rate of 92.1 percent. Although this was considered adequate for the study, 100 percent response would have been more preferable.

5.6 Suggestions for Further Research

Further studies should be conducted to find out the reasons for the low adoption of TQM practices among the oil marketers in Kenya. Oil marketers need to be aware of the impact of TQM practices on their operational performance. Therefore, there is need for studies to measure operational performance on other dimension and not just TQM so as to enhance the efforts being done to fight adulteration and proliferation of petroleum products in Kenya.

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APPENDICES

Appendix I Letter of Introduction

UNIVERSITY OF NAIROBI
SCHOOL OF BUSINESS

Telephone: 020-2059162
Telegrams: "Varsity", Nairobi
Telex: 22095 Varsity

P.O. Box 30197
Nairobi, Kenya

DATE.....

TO WHOM IT MAY CONCERN

The bearer of this letter ...JOSHUA OMBONGI KEBATI.....

Registration No...D61/81201/2015.....

is a bona fide continuing student in the Master of Business Administration (MBA) degree program in this University.

He/she is required to submit as part of his/her coursework assessment a research project report on a management problem. We would like the students to do their projects on real problems affecting firms in Kenya. We would, therefore, appreciate your assistance to enable him/her collect data in your organization.

The results of the report will be used solely for academic purposes and a copy of the same will be availed to the interviewed organizations on request.

Thank you.

UNIVERSITY OF NAIROBI
18 OCT 2018
P.O. Box 30197 - 00100, NAIROBI

PROF. JAMES M. NJIHIA
DEAN, SCHOOL OF BUSINESS

Appendix II Questionnaire

"I am a student undertaking an MBA programme at the University of Nairobi, and am conducting a study titled **Total Quality Management Practices of Oil Marketing Firms in Kenya: A Case Study of Gulf Energy Limited.** This questionnaire will help me in collecting data which will be useful to my study. It has four parts each containing questions on demographic and respondents profile, total quality management practices, challenges faced in implementation of total quality management practices and the impact of total quality management practices on operational performance. Kindly complete the questionnaire as per the instructions. Your participation is highly appreciated."

1. Name of respondent (optional)

   ……

2. Name of your service station (optional)

   ……

3. What is your highest academic qualification? (tick as applicable)
   a) Certificate [ ]
   b) Diploma [ ]
   c) Bachelor's degree [ ]
   d) Master's degree [ ]
   e) PhD [ ]
   f) Others (please specify) ……

4. Length of continuous service in the company. (tick as applicable)
   a) Less than two years [ ]
   b) 2-5 years [ ]
   c) 6-10 years [ ]
   d) Over 10 years [ ]

Part B: Total Quality Management Practices

"To what extent are the following total quality management practices implemented in your service station? Use 1 = Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly Agree. Kindly tick (√) once in each part."

	Top management commitment	1	2	3	4	5
1	Top management has established quality policy and objectives.					
2	Top management communicates the quality policy.					
3	Top management ensures quality requirements are integrated into the processes.					
4	Top management promotes continual improvement.					
5	Top management ensures availability of resources for implementation of quality programs.					
6	Top management actively encourages change.					
7	The company's plan always incorporates internal and external customers; transporters; suppliers and other stakeholders.					
	Customer Focus					
1	Customer input is sought to identify their needs and their expectations					
2	Customer requirements are understood and are well communicated to all employees					
3	"Customers are involved in product/service design process"					
4	"Products and services produced consistently meet customers' demands effectively"					
5	There is an elaborate process to address customer issues					
6	Consumer feedback is used to improve on the quality of products and services					
7	"Risks and opportunities for customer growth are determined and effectively addressed."					
	Employee Involvement					
1	"Employees understand that quality is their responsibility"					
2	"Employees are actively involved in product and service design"					
3	Measurement on employee satisfaction is performed regularly					
4	"The employees are provided with feedback on their quality performance."					
5	Employees are well trained on improving quality					
6	Employee flexibility, multi-skills and training are effectively utilized					
7	There is an established criteria for measurement and recognition					
8	Employees understand the quality statement of the organization					
9	Employees understand the need for ISO audits, and participate in them willingly.					

	Systems Approach					
1	Customer requirements are effectively communicated and understood by all employees					
2	Employees adhere to the company's timelines in service delivery as stipulated in the service charter					
3	Customer complaints and concerns are responded to within stipulated timelines					
4	customer input is sought to identify their needs and expectation					
5	Customer feedback forms are provided for customers to give their assessment of product and service quality					
1	**Process Management**					
2	The processes are well documented in procedure manuals and the information is available to the employees					
3	The processes are always updated to meet customer needs					
4	The processes are periodically reviewed to incorporate current trends.					
5	The processes are periodically audited to seal any loopholes in the system					
	Teamwork					
1	The workers work in teams in the organization					
2	The management recognizes these teams and awards the teams which perform well					

Part C: Government involvement in the oil industry

"Show the extent to which the following government interventions have influenced operational performance in your station. Use a scale of 1 to 5, where 1 = Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly Agree. Kindly tick (√) once in each part."

	Influence of government regulation on operational performance	**1**	**2**	**3**	**4**	**5**
1	The uniformity of prices has led to better performance through improved quality.					
2	The monthly raids by KEBS, ERC and KRA have greatly improved the quality of the petroleum products					
3						
4						
5						

Others (please specify)

i. ……..

ii. ……..

iii. ……..

Part D: Challenges Faced in Total Quality Management Implementation in Your Station

Indicate the extent to which each of the following statements relating to challenges organizations face during the implementation of total quality management. Use a scale of 1 to 5, where 1 = Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly Agree. Kindly tick (√) once in each part.

	Challenge of Total Quality Management Implementation	**1**	**2**	**3**	**4**	**5**
1	Inadequate resources					
2	Lack of quality planning					
3	Lack of Quality management practices in quality implementation					
4	Insufficient training					
5	Inability to change the organizations culture					
6	Lack of customer orientation					
7	Poor teamwork among employees					

Others (please specify)

i. ……..

ii. ……..

iii. ……..

Part E: Operational Performance

"To what extent has your service station experienced the following outcomes as a result of practicing TQM? Use 1= Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly Agree. Kindly tick (√) once in each part"

	Employee Morale	**1**	**2**	**3**	**4**	**5**
	Employees are more motivated, committed and involved in decision making within the organization					
	Employees are now more accountable for their own performance					
	Employees are more eager to participate in and contribute to quality improvement in the station					
	Employees openly discuss problems and issues					
	Employees actively seek training opportunities to enhance their competence, knowledge and experience.					
	Employees accept ownership of problems and their responsibility in solving them					
	Employees understand the importance of their role and contribution in enhancing the overall operational performance					
	Any other please mention;					
	Customer Satisfaction					
1	There is an increased revenue and market share obtained through flexible and fast response to market opportunities					
2	There is increased use of the organizations resources to enhance customer satisfaction					
3	There is improved customer loyalty leading to repeat sales					
4	There is a reduction in the number of customer complaints.					
5	There is a better understanding of customer needs and expectations					
6	There is enhanced communication of customer needs and expectations throughout the organization					
7	Customer satisfaction is measured and results acted upon					
	Any other, please mention;					

THANK YOU

Appendix III Overall Market Share Including Exports

Company	Percent Share
Total Kenya	14.2
Kenol Kobil	13.8
Vivo	13.0
Gulf	7.8
Hashi	7.3
Libya oil	4.6
Nock	4.5
Petro	3.6
Gapco	3.1
Fossil fuels	3.1
Hass	2.6
Bakri	2.3
Afri Oil	1.7
Tosha	1.4
Oryx	1.3
Tristar	1.2
MGS	1.0
Ainushamsi	0.9
Galana	0.8
Engen	0.8
Stabex	0.8

Source: Petroleum Institute of East Africa, June 6, 2018

Appendix IV List of Gulf Energy Service Stations

1. Gulf Energy - Jogoo Road
2. Gulf Energy – Thome
3. Gulf Energy - Eastern Bypass Service Station
4. Gulf Energy – Membley
5. Gulf Energy - Ngong Bulbul
6. Gulf Energy - Thika Road
7. Gulf Energy - Kitengela Service Station
8. Gulf Energy - Rironi Service Station
9. Gulf Energy – Tigoni
10. Gulf Energy - Machakos Junction
11. Gulf Energy - Muranga Junction 'MJ' Service Station
12. Gulf Energy - Makuyu Station
13. Gulf Energy - Saba Saba, Kenol-Muranga Rd, Kenya
14. Gulf Energy - Fly Over, Nairobi-Eldoret Rd,
15. Gulf Energy Yatta Service Station
16. Gulf Energy - Maili Nne
17. Gulf Energy - Muranga Town Station
18. Gulf Energy - Nyeri Skuta
19. Gulf Energy – Nyeri. Chania Bridge,
20. Gulf Energy - Narok Service Station
21. Gulf Energy - Namanga Station
22. Gulf Energy - Nakuru Town Station
23. Gulf Energy – Ojays, George Morara Rd, Nakuru, Kenya
24. Gulf Energy – Chuka
25. Gulf Energy - Nanyuki Station
26. Gulf Energy - Njoro Station
27. Gulf Energy – Makindu
28. Gulf Energy - Nyahururu Station
29. Gulf Energy - Menya Service Station, Meru, Kenya
30. Gulf Energy – Nkubu
31. Gulf Energy - Meru Riverland
32. Gulf Energy - Menany Station
33. Gulf Energy - Mau Summit
34. Gulf Energy - Kisii Station
35. Gulf Energy - Kisumu Town Station
36. Gulf Energy Kisumu Nyamasaria Service Station
37. Gulf Energy – Eldoret
38. Gulf Energy – Kanduyi

Source: Gulf Energy Limited website