

**ISO 9001 QUALITY MANAGEMENT SYSTEM AND SERVICE DELIVERY  
IN THE ROAD SECTOR: A CASE OF PROJECT MANAGEMENT AND  
ENGINEERING CONSULTANTS LIMITED (PROME) IN UGANDA**

**BY**

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## **DECLARATION**

I, Prize Ahumuza, have read and fully understood the rules of Uganda Technology and Management University (UTAMU) concerning plagiarism. I hereby state that this work is my own and has not been submitted to any other institution for another degree or qualification, either in full or part. Throughout the work I have acknowledged all sources used in its compilation.

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## APPROVAL

This is to certify that this dissertation was submitted with my approval as the authorized and nominated supervisor of Uganda Technology and Management University.

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Signature: .....

Date: .....

## **DEDICATION**

I dedicate this dissertation to my entire family who have been my source of inspiration and encouragement during my course of study.

May God bless YOU

## **ACKNOWLEDGEMENTS**

I would like to express my heartfelt gratitude and indebtedness to my supervisor, Mr. K. Dennis Omvia for his invaluable contribution in the execution of this research. I will always be indebted to my friends and colleagues for their invaluable guidance and untiring attention, which they bestowed on me right from the inception till the successful completion of this research. I truly respect them for their patience and support through the highs and lows of this research. Without their inputs, this research would have remained a distant dream. I thank all the participants of the study for their active involvement, and the Management of Uganda Technology and Management University for their professional attention and support.

May God reward You all

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## **LIST OF ABBREVIATIONS**

EU	European Union
GoU	Government of Uganda
ISO	International Organization for Standardization
NAPs	National Action Plans
SMEs	Small to Medium Enterprize

## **Abstract**

This study sought to examine the effect of Quality Management System (QMS) based on ISO 9001 and service delivery in the road sector, a case of Project Management and Engineering Consultants Limited (PROME) in Uganda. ISO 9001 Quality Management System was the independent variable, while service delivery was the dependent variable. ISO QMS was measured in terms of customer focus, leadership, and engagement of people while service delivery was measured in terms of customer satisfaction, revenue and market share, efficiency and effectiveness. The issue which was being dealt with in this study was whether ISO 9001 can have a positive effect on a firm's operational performance. -From the findings in the study 5 (7.7%) of respondents indicated that leadership support influence service delivery to a great extent, 45(69.2%) indicated a very great extent influence, 2(3.1%) indicated a moderate extent influence, 3(4.6%) said it influenced it to a low extent, while the remaining 10(4 %) indicated that it influenced it to a very low extent. Three (4.6%) of respondents indicated that customer focus influenced service delivery to a great extent. Fifty (50) (76.9%) indicated a very great extent influence, 2(3.1%) indicated a moderate extent influence, 3(4.6%) said it influenced it to a low extent while the remaining 7(10.7 %) indicated that it influenced it to a very low extent. Based on the findings, it was concluded that in order for an organization to successfully implement quality management system, the top management must create, share and sustain quality management targets and values. The study findings indicate that for successful quality management practice an organization needs to establish a process of understanding current and future needs of its clients, ensure efficient management response to customer complaints and a consistent tracking and measuring of customer satisfaction through surveys. Based on the findings of this study, it was concluded that in order for an organization to successfully implement

quality management system, the top management must create, share and sustain quality management targets and values.

# **CHAPTER ONE**

## **INTRODUCTION**

### **1.1 Introduction**

This study sought to examine the effect of Quality Management System (QMS) based on ISO 9001 and service delivery in the road sector, a case of Project Management and Engineering Consultants Limited (PROME) in Uganda. ISO 9001 Quality Management System is the independent variable while service delivery as the dependent variable. ISO QMS was measured in terms of customer focus, leadership, and engagement of people while service delivery was measured in terms of customer satisfaction, revenue and market share, efficiency and effectiveness.

In addition to the above introduction, this chapter deals with the background to the study, the statement of the problem, purpose of the study, specific objectives of the study, research questions, hypotheses, scope of the study, significance, justification and operational definition of terms and concepts.

### **1.2 Background to the Study**

#### **1.2.1 Historical Background**

Organizational systems developed for quality improvements were in the beginning of the 21st century one of the highest ranked priorities for management ( Ravichandran & Rai, 2000, p. 381). The most common and recognized QMS is the one created by the International Organization for Standards (ISO) and its framework of ISO 9001:2000 (Gutierrez et al, 2010, p. 579). The escalating demand for management systems stems from organizations experiencing low quality, dissatisfied customers, high costs, and production or delivery delays and the wish to address them ( Ravichandran & Rai, 2000:12; McTeer & Dale, 1996:55). More specifically, Juran (1995:23) explained the forces behind the demand for quality systems to be “(a) greater complexity and precision of products, (b) threats to human society and health, and to the environment, (c) government regulation of quality, (d)

the rise of the consumerism movement, and (e) intensified international competition in quality” (Juran 1995, p. 630). Other forces triggering the start of quality systems were the competitive threats from the Far East, as competitively priced and close substitute products and services coming from low labour cost countries threatened the organizations in the Western World (Dale et al, 2007). Also, the demands for a quality management system stem from internal motivation to portray their organization as a certified entity and enhance the marketing perception of the organization (McTeer & Dale, 1996, p. 238).

QMSs are argued to bring great benefits to organizations in terms of revenue growth (McTeer& Dale, 1996:12), increased customer satisfaction (Casadesús& De Castro, 2005:35), higher profit margins, greater return on assets, improved control of business processes and procedures (Dale et al., 2007; Beckford, 1998), higher quality of products and services, increased productivity and efficiency (Gutiérrez et al., 2010:90; Carlsson & Carlsson, 1994:22), and better teamwork and leadership (Van der Wiele et al., 2005:12). Dale et al. (2007:33) presented authors such as Atkin (1987), Brown (1993), Dale & Oakland (1994:67) and Munro Favre et al. (1993:45) and they suggested that an organization can improve its internal efficiency, ensure better use of time and resources, improve product and service consistency, eradicate the need for re-working and bring about cost savings. In essence, quality management systems boils down to making processes and procedures more standardized, resulting in better co-ordination, transmitting of information and added consistency to the organization (Brunsson & Jacobsson, 2000. 169-170; Dale et al., 2007:23). If employees and managers were to work towards the same goals and objectives, the organization would run smoother with less uncertainty and better visualized activities (Brunsson&Jacobsson, 2000:57).

ISO is an International Organization for Standards that was formed by technical committees. It was established in 1947, in Switzerland, with the purpose of developing intellectual, scientific,



technological, and economic cooperation between member countries. Later in 1979 the ISO Technical Committee (ISO/TC 176) was formed to make a set of guidelines that would bring together and standardize world industries. These standards have their origin as a British Standard, BS5750 first published in 1979. ISO has affiliates in more than 90 countries. It is interesting to note that the phrase ISO is drawn from the Greek word “isos” which means “same as”. The words “same as” can carry the implication that the consumer gets what the consumer expects. In our quality assurance class we have learned that if consumers get what they expect, this is considered quality (Nurre, Gunaman & De-almeida, and 2000:78). These standards were revised in 1994, and again in 2000. They have been applied in firms of all sizes and from all areas of business. Pinar, Crouch, Yucel and Guder (2003:69) maintain that the original ISO 9000 standards and the 1994 revision have only required that an organization should have a documented and verifiable process in place to ensure that it consistently produces what it says it will produce.

ISO 9000 series of standards have become widely accepted for companies aiming to achieve cost effective and quality assurance methods (Nurre, Gunaman & De-almeida, 2000:84). The standards are intended to assist organizations of all sectors and sizes to implement and operate an effective quality management system. The generic nature of the standards allows interested companies to determine the specifics of how the standards apply to their organizations. Registration or certification to the standards demonstrates to customers that the supplying organization has achieved a basic level of quality assurance by the formalization and documentation of its quality management system (Wahid & Corner, 2011:25). Organizational analysts have identified implementation failures as a main reason that organizations have not benefited from practices such as ISO 9001, viewing the process of implementation as akin to a fad and fashion; managers implement such practices in the same ways that people make decisions about the length of a skirt or the width of a tie, as a

consequence of being persuaded by glitzy rhetoric that exploits their vulnerabilities and psychological needs (Naveh & Marcus, 2005:33).

Nevertheless, Terlaak and King (2000:54) suggest that the implementation of practices such as ISO 9000 can raise organizational performance and result in real competitive advantage. Quality standards, such as ISO 9000, have continually evolved and have been refined over time and are supposed to offer a competitive factor in many industries. However, since knowledge of ISO 9000 is public and implementation of the practice aims to create greater homogeneity among organizations, it is debatable if ISO 9001 constitutes a competitive factor. Bell and Omachonu (2011:55) maintain that competitive advantage arises from the differences among firms (heterogeneity), but if all companies implement ISO 9000 in the same way, can a particular company derive a special benefit.

### **1.2.2 Theoretical Background**

The theory and practice of quality has evolved from the concept of simple quality inspection to total quality management. It is possible to distinguish four stages in the evolution of the quality ideas (Yucel & Guder, 2003;15). They include quality inspection, quality control, quality assurance and total quality management.

Quality inspection involves the inspection of products at the end of the production process. Finished products are either approved for sale or rejected. Quality control builds on quality inspection by introducing statistical techniques as well as detailing how a process should be operated and stipulating performance guidelines.

Phillip Crosby (2011:66) defined quality as conformance to requirements while using a quality system to prevent defects as well as measuring quality as the price of nonconformance and adopting

zero defects as the quality standard. Ishikawa stressed on the need to involve everyone in the quality improvement process and advocated the use of statistical methods and problem-solving techniques.

Quality assurance moves the concept of quality beyond measurement and feedback control towards a more proactive approach aimed at preventing quality problems from occurring in the first place. This is achieved by the introduction of comprehensive quality management systems based on detailed manuals that set out how an entire operation should be managed. The aim is to shift the whole focus towards solving quality problems by attacking their causes rather than their effects. Total quality management switches the emphasis from the mere application of tools and techniques to changing attitudes so that quality becomes embedded in the value and beliefs of everyone in an organization with an aim of exceeding the expectations of customers. TQM sees quality as a source of competitive advantage (Barnes, 2008:35).

Quality in service organizations is difficult to define due to the fact that services are intangible and are consumed at the point of production and often involve contact with customers. The singular nature of many service encounters makes their standardization more difficult. Due to the person-to-person interaction in customer service, setting quality standards and measuring performance requires consideration of both the service provider and the customer perception of quality. Any measurement of performance and control of quality must be carried out in a way that does not interfere with the provision of a service ( Aquilano & Chase, 2001:35).

Many quality experts advocate the use of a quality management system as it offers a structured and methodical approach to managing quality by systematically organizing how activities should be carried out. There are various quality management standards that have been developed. These include the International Organization for Standardization (ISO) 9000, the US Federal Sentencing Guidelines, recent regulations of the Occupational Safety and Health Administration (OSHA),

environmental management standards, and the Committee of Sponsoring Organizations of the Treadway Commission (COSO) Framework internal controls for financial management.

These standards are lists of design rules that guide the creation of entire classes of management systems. They constitute a new management technology that may bring meaningful standardization to general management practice (Uzumeri, 1997:16). ISO 9001 which is the focus of this study is a standard that was developed by the International Organizations for Standardization and serves as a framework for organizational quality management systems. This framework is recognized by organizations and governments around the world. Organizations incur significant costs to obtain certification making it worthwhile to study the process to better understand the pertinent measures for certification success. It has been adopted by organizations and agencies of different industries and sectors (Bell & Omachonu, 2011:13).

### **1.2.3 Conceptual Background**

In this study, the main concepts were: quality management system and service delivery in terms of performance, company profitability and customer satisfaction. Each of these concepts has been conceptualized differently by different authors and they had specific application contexts in the study. In general, a system can be defined as “a specific methodology for organizing activities in order to achieve a purpose” (McDonald et al., 2007:108). This involves directing flows of work, information, money, people, materials and equipment (McDonald et al, 2007: 108). A quality management system (QMS) can be defined as “a set of interrelated or interacting elements to establish policy and objectives and to achieve those objectives to direct and control an organization with regard to quality” (Wilkinson & Dale, 2002:289).

According to the American Society of Quality, quality is defined differently by each organization taking into account the organizational environment and the unique characteristics regarding a

particular organization. Crosby (1979:22) defines quality as “conformance to requirements”; Juran (1989) sees quality as “freedom from deficiencies”; and Bucharest City Hall’s Quality Management Handbook (2011:17) describes quality as “the measure in which a set of intrinsic characteristics fulfills the requirements”.

#### **1.2.4 Contextual Background**

The study was contextualized within the evolving trends of road sector management in Uganda, specifically with PROME Consultants Limited. Established in 1996, Project Management and Engineering Consultants Limited (also trading as PROME consultants limited) is Ugandan multi-disciplinary engineering and project management consultancy firm that is ISO-certified and committed to excellence, professional, integrity and continual improvement in its provision of quality, economical, cost-effective, reliable, socially and economically acceptable engineering solutions and project management services tailored towards customer satisfaction. For Uganda to achieve the double-digit economic growth envisaged in Vision 2030, it must be able to respond to local and global market demands. Uganda, just like many African countries, is confronted by a myriad of challenges in improving its capacity to meet production and quality standards which are obligatory so as to access foreign markets, especially the European Union which is one of her biggest trading partners. Uganda stands to spur its economic growth to a double-digit figure through participating in standards development, adopting and complying with ISO international standards. ISO international standards offer Uganda convenient solutions that will not only respond to the local and global market demands, but also be a panacea to the technological problems that it encounters (Omukhweso, 2012:31).

### **1.3 Statement of the Problem**

Over the last decade, working sectors in Uganda have witnessed high motivations to go with the implementation of available quality management system standards. The most popular standard is the ISO 9001 quality management. Organizations in the region implement the ISO 9000 Quality Management System and obtain the consequent approvals, rewards and certificates, but unfortunately, without the actual and effective implementation on the ground. The ISO International Standard requires that the adoption of a quality management system should to be a strategic decision of the organization. The design and implementation of an organization's quality management system is influenced by varying needs, particularly, objectives, the products provided, the processes employed and the size and structure of the organization. In addition to that, involving workers and gaining their satisfaction is the key success factor for the implementation of any new management system.

Project Management and Engineering Consultant Limited (PROME) is ISO certified with certificate no.900824, standard (ISO, 9001:2008) and is involved in large business with government ministries and agencies, water and power utility companies, international engineering firms that need partners in Eastern and Southern Africa, investment banks and other financial institutions among others. Although the implementation of the ISO 9001 Quality Management System internationally proved its effectiveness and positive impacts on the overall performance of the organizations, the impacts of its implementation in the area of road construction remains questionable. This raised the curiosity of the researcher hence the need to examine the effect of ISO 9001 QMS on service delivery in the road sector, a case of PROME in Uganda.

#### **1.4 Purpose of the Study**

The main purpose of this study was to examine the effect of Quality Management System (QMS) based on ISO 9001 on service delivery of Project Management and Engineering Consultants Limited (PROME) in Uganda..

#### **1.5 Specific Objectives**

- i. To establish how leadership support influences service delivery at PROME in Uganda;
- ii. To examine how customer focus influences service delivery at PROME in Uganda;
- iii. To establish the relationship between engagement of people and service delivery at PROME in Uganda.

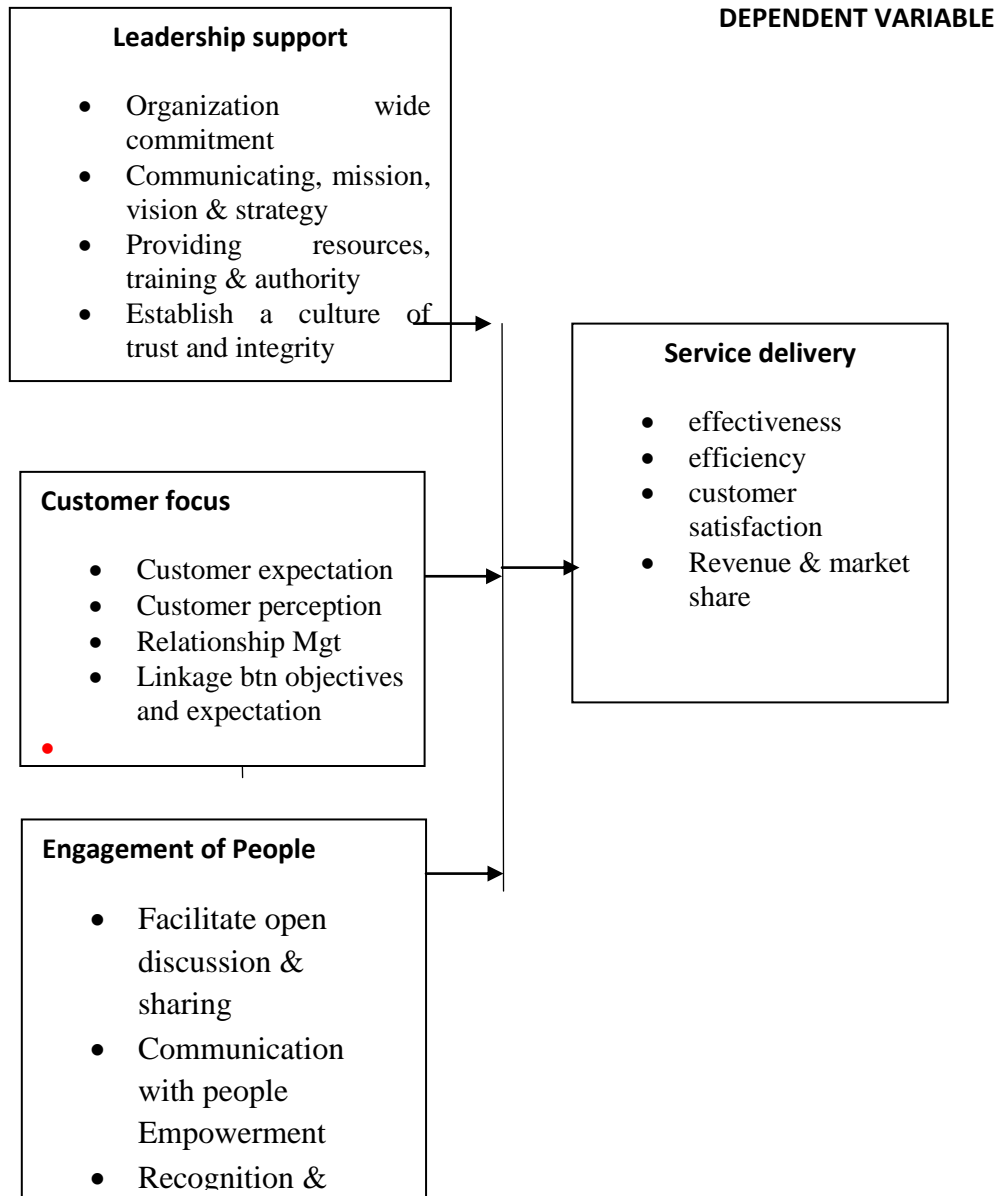
#### **1.6 Research Questions**

- i. How does leadership support influence service delivery at PROME?
- ii. How does customer focus influence service delivery at PROME?
- iii. What is the relationship between engagement of people and service delivery at PROME?

#### **1.7 Study Hypotheses**

- i. There is a positive relationship between leadership support and service delivery;
- ii. There is a significant positive relationship between customer focus and service delivery;
- iii. Engagement of people has got a positive influence on service delivery.

## 1.8 Conceptual Framework



**Figure 1.1 Source:** Adopted from Cheah (2010:23) and modified by the Researcher.

The issue which is being dealt with in this study is whether ISO 9001 can have a positive effect on a firm's operational performance. The installation and implementation of ISO 9001 standards is expected to have a positive impact on the costs of services provided. Formalization and



documentation of an organization's quality management system shows that it has achieved a basic level of quality assurance through independent auditing hence certification.

Leadership support at all levels establishes unity of purpose, direction and creates conditions in which people are engaged in achieving the organization's quality objectives such as creation of unity of purpose, direction and engagement of people enables organization to align its strategies, policies, processes and resources

Sustained customer focus is achieved when an organization attracts and retains the confidence of customers and other interested parties and the key benefits include increased customer value, increased customer satisfaction, increased revenue and market share and many others.

Competent, empowered and engaged people at all levels through the organization are essential to enhance its capability to create and deliver value. To manage an organization effectively and efficiently, it is important to involve all people at all levels and to respect them as individuals. Recognition, empowerment and enhancement of competence facilitate the engagement of people in achieving the organization's quality objectives.

Motivation of employees influences the performance of the organization. The cost of services provided should respond to the use of ISO standards as the needs of the stakeholders are understood and incorporated, the integration of the standards with the assets of an organization (practices) will ensure the consistent quality in the services provided as interactions with the customers are improved and services are delivered in a standardized manner. Consistent application of the principles of the standard in day-to-day operations should lead to other improvement initiatives due to an enhanced awareness

Contextual factors such as company size, industry as well as experience in implementation were discounted with support from the following previous studies. After conducting a survey on the implementation activities involved in certifying a quality management system to the ISO 9001 standard Bell and Omachonu (2011:55) found that operating costs and sales increase were robust across the contextual factors they examined in their study, i.e. company size, industry, length of time since certification.

Secondly, Lee to and Yu (2009) also indicate that contextual factors, i.e. size, experience in implementing ISO 9001 and industry type are unlikely to be the predictors to explain the ISO 9001 implementation patterns. In other words, their results reveal that managers of sample firms that they studied did not consider contextual factors as crucial variables when they had to decide how to implement ISO 9001. The motive for certification either external or internal will be used as the control variable. This will be a dichotomous measure of whether the motivation was due to external pressures from customers, suppliers or response to competitors achieving certification or internal credibility where the organizational members feel the need to certify with the ISO 9001 standard.

### **1.9 The Significance of the Study**

Uganda's future prosperity depends on how well its service provision industrial synergy is utilized. Industrial growth is considered an important engine for economic growth because of opportunities for innovation and optimum use of skills (Dejardin, 2000:44). This research will, therefore, provide useful information to management sciences researchers, practitioners, ISO certifying organizations and policy-makers, in Uganda. Social policy makers will gain a deeper understanding of the reasons why some service companies have not effectively provided services to their customers' expectations let alone meeting the applicable statutory and regulatory requirements. The relevant ministry/department can use the results to determine whether the service companies that are certified on ISO

quality management systems do so as an obligation or requirement by the national or international laws, or as stipulated in the standards manual, - as a strategic decision for the organizations to improve their overall performance and to provide a sound basis for sustainable development initiatives. The outcome of the study will significantly confirm whether or not the researches on ISO effectiveness that have been done in other countries can be applied to Uganda consultancy service industry as well. It will also provide empirical results as to the factors motivating ISO certification among other industries in Uganda.

### **1.10 Justification of the Study**

Given the enabling and driving role that government plays in the development of services economies, it is useful for policy-makers to devise national services development strategies. This can only be possible if studies like this proposed research study are done. Based on the fact that there exists a problem of measuring service delivery, and the lack of literature on the same subject, it is imperative to mention that carrying out research on the effectiveness of the ISO 9001 quality management system standard will provide more information and build on the existing studies carried out in other countries. Meaningful implications will arise for practitioners and researchers as well in the fields of quality service delivery among consultancy firms in Uganda. The effectiveness of the ISO 9001 QMS of a consulting SME can be evaluated by a quality manager and a researcher as well. Not only can the suggested framework of the ISO 9001 QMS's effectiveness be used as a self-assessment tool but also as a benchmarking tool. By evaluating the achievement of the ISO 9001 objectives, and furthermore by having a quality manager controlling the most influential critical factors, a company can further increase the ISO 9001 QMS's effectiveness in service delivery.

## **1.11: Scope of the Study**

This research sought to investigate the effectiveness of the ISO 9001 QMS standards on quality service delivery among consultancy service companies in Uganda, focusing on PROME (Project Management and Engineering) consultants

### **1.11.1 Content Scope**

The study sought to establish the relationship between customer focus and service delivery, leadership support and service delivery and engagement of people and service delivery at project management and engineering consultants limited in Uganda.

### **1.11.2 Geographic Scope**

The study was carried out at the head office PROME consult located in Kampala, 7B, Babiha Avenue which centrally coordinates all the projects, including road construction projects, in the country side.

### **1.11.3 Time Scope**

This study covered periods from 2007 to 2010, this being the period before and after project management and engineering consult was ISO 9001 quality management system certified. The researcher carefully selected this period in order to ascertain whether ISO 9001 certification or not has effect on quality practices and procedures that translate into customer satisfaction.

## **1.12 Operational Definitions**

### **ISO**

ISO 9001 is an International Standard that is used worldwide by over one million organizations. It assists businesses of all sizes by providing best practice requirements for an effective Quality Management System (QMS).

## QMS

A quality management system enables a business to run more efficiently and profitably. It provides a way to organize people, resources and processes to achieve organizational goals, regardless of the size of the business.

### Customer satisfaction

*Customer satisfaction* is a perception. It is also a question of degree. It can vary from high satisfaction to low satisfaction. If customers believe that you have met their requirements, they experience high satisfaction. If they believe that you've not met their requirements, they experience low satisfaction.

### Competence

*Competence* means being able to apply knowledge and skill to achieve intended results. *Being competent* means having the knowledge and skill that you need and knowing how to apply it. Being competent means that you're qualified to do the job

### Complaint

In the context of ISO 9001, a *complaint* refers to an expression of dissatisfaction with a product or service and is filed by a customer and received by an organization. Whenever a customer lodges a complaint, a response is either explicitly or implicitly required.

### Concession

A *concession* is a special approval that is granted to release a non-conforming product or service for use or delivery. *Concessions* are usually restricted to a specific use and limited by time and quantity and tend to specify that non-conforming characteristics may not violate specified limits.

### Customer

A *customer* is anyone who receives products or services (outputs) from a supplier. *Customers* can be either people or organizations and can be either external or internal to the supplier organization. Examples of customers include clients, consumers, users, guests, patients, purchasers, and beneficiaries

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter sets the study subject in a broader context through investigation of relevant literature and other sources. This section presents the theoretical review and literature based on the objectives of the study

#### **2.2 Theoretical Review**

This study was guided by the stakeholder theory. Stakeholder theory begins with the assumption that values are necessarily and explicitly a part of doing business. It asks managers to articulate the shared sense of the value they create, and what brings its core stakeholders together. It also pushes managers to be clear about how they want to do business, specifically what kinds of relationships they want and need to create with their stakeholders to deliver on their purpose. The focus of stakeholder theory is articulated in two core questions (Freeman, 1994). First, it asks, what is the purpose of the firm? This encourages managers to articulate the shared sense of the value they create, and what brings its core stakeholders together. This propels the firm forward and allows it to generate outstanding performance, determined both in terms of its purpose and marketplace financial metrics. Second, stakeholder theory asks: what responsibility does management have to stakeholders? This pushes managers to articulate how they want to do business; specifically, what kinds of relationships they want and need to create with their stakeholders to deliver on their purpose. Today's economic realities underscore the fundamental reality we suggest is at the core of stakeholder theory: Economic value is created by people who voluntarily come together and cooperate to improve everyone's circumstance. Managers must develop relationships, inspire their stakeholders, and create communities where everyone strives to give their best to deliver the value the firm promises.

Certainly, shareholders are an important constituent and profits are a critical feature of this activity, but concern for profits is the result rather than the driver in the process of value creation.

According to McCloskey (1998), the “maximizing shareholder value” view is put forward as a “scientific” theory that is modelled and verified appropriately by ideologists called “economists.” Unfortunately, in an attempt to be accepted by their “scientific brethren,” several management theorists have adopted the fashion of accepting the economic view of business activity as the most useful one available and have fallen into the trap of the separation thesis. “Maximizing shareholder value” is not a value-neutral theory and contains vast ideological content. At its worst, it involves using the prima facie rights claims of one group—shareholders—to excuse violating the rights of others. Shareholder rights are far from absolute, regardless of how much economists talk about the corporation as being the private property of the shareholders. The rights of shareholders are prima facie at best, and cannot be used to justify limiting the freedom of others without their consent.

On the other hand, Phillips (2003) argued that stakeholder theory involved a theory of organizational management and ethics which was distinct because it addressed morals and values as explicit central features of organizational management. He also pointed out that: Managing for stakeholders involved attention to more than simply maximizing shareholder wealth. Attention to the interests and well-being of those who can assist or hinder the achievements of organization’s objectives is the central admonition of the theory. In this way, stakeholder theory is similar in large degree with alternative models of strategic management such as resource dependence theory (p. 16). Stakeholder theory attempted to describe, prescribe, and derive alternatives for corporate governance that included and balanced a multitude of interests. The theory has drawn considerable attention and support since its early formulation. Stakeholder theory incorporates the executive power model, which claimed that the purpose of a corporation is the maximization of corporate wealth. However, this intensified the

problem directors acting in their own self-interest, as they support policies that led to the protection of their positions and powers in the company (Hutton, 1995; Kay and Silberston, 1995). Indeed, the executive power model claimed that the purpose of corporation is the maximization of stakeholders' wealth as a whole. However, this involved the absence of stakeholder involvement in the running of the company, giving directors the opportunities to push policies that do not take the needs of the company's stakeholders into consideration (Freeman, 1984; Evan and Freeman, 1993; Blair, 1995; Phillips, 1997; 2003).

### **2.3 The Relationship between Leadership Support and Service Delivery**

Leaders at all levels establish unity of purpose and direction and create conditions in which people are engaged in achieving the organization's quality objectives. Creation of unity of purpose and direction and engagement of people enable an organization to align its strategies, policies, processes and resources to achieve its objectives.

All the activities that make up a firm's operation relate to one another. Consequently, a firm's management has to decide which parameters of performance are critical to the firm's success and then concentrate the resources available on these particular characteristics. Improvement of the systems that create and deliver the firm's primary products and services will lead to better quality products and services, costs will decrease and defects rates will be minimized, customer satisfaction will be achieved (Aquilano, Chase & Jacobs, 2009). Terziovski, Feng and Samson (2007) define operational performance as the performance related to an organization's internal operations, such as productivity, product quality and customer satisfaction.

ISO certification is supposed to lead to advantages in the processes of organizations. These benefits include such things as improvement in throughput time, increase in technical flexibility, improvement of co-ordination of activities, improvement in product or service specifications,



increase in internal and external delivery performance and improvement in efficiency. A company operating within the requirements of the ISO 9001 standards should achieve customer satisfaction as the interactions with customers are improved and reductions in customer complaints are achieved. The standards are supposed to have a positive influence on employees which may lead to an increase in motivation albeit the fact that the standards increase the documentation workload and standardization of procedures which may impede the creative thinking of employees (Singels, Ruel & Water, 2001).

Within house, standardized and replicable routines and procedures for product design, manufacture, delivery, service and support more time would be devoted to manufacturing acceptable products or provision of better services; there would be less rework, less scrap and fewer wasted materials. Less rework and higher productivity should result in lower expenses, which would translate into higher gross profit margins. With lower defect rates and on-time delivery, sales should grow because new markets are created and customer retention is high (Naveh & Marcus, 2005).

When employees work according to the procedures that are described in the ISO 9001 series they are able to identify sources of problems in the production process. This enhances the purpose of the ISO 9001 series procedures which are meant to guarantee that the products or services an organization offers are in accordance with customer specifications. With better operational performance, the products or services the organization offers should become more attractive to customers and the firm should have better business performance. Sales and profitability should increase (Singels, Ruel & Water, 2001).

Quality in service organizations is difficult to define due to the fact that services are intangible and are consumed at the point of production and often involve contact with customers. The singular nature of many service encounters makes their standardization more difficult. Due to the person-to-

person interaction in customer service, setting quality standards and measuring performance requires consideration of both the service provider and the customer perception of quality. Any measurement of performance and control of quality must be carried out in a way that does not interfere with the provision of a service (Aquilano & Chase, 2001).

### **2.3.1 Encourage organization-wide commitment to Quality**

Within the philosophy of QMS, having a process-oriented approach underlines the necessity of having processes designed to meet quality requirements. Furthermore, it is essential that critical and core processes are recognized and supported, in order to ensure an appropriate resource allocation to map, inspect and improve these processes.

### **2.3.2 Communicating organization's mission, vision, strategy, policies, processes throughout the organization**

In order to gain full advantage of this knowledge, it is important that incoming information and changes in customer preferences are analyzed and understood (Rahman & Bullock, 2005:148). Quality data and reporting involves a high degree of documentation, tracking and feedback. Clearly documenting various process procedures and waste and defect rates as well as keeping the information readily available to every employee, is argued to be an important factor underlying the success of the organization (Kaynak, 2003:103]. Saraph et al. (1989:154] likewise stresses the importance of providing information on quality data to employees and managers, for problem solving and prevention.

### **2.3.3 Providing people with the required resources, training and authority to act with accountability**

Preventive actions, such as waste reduction and error prevention is thus highlighted as an essential premise when designing QMS processes (Kanji, 2002:99). The importance of applying adequate statistical methods to secure a high level of process control and in continuation hereof using the assessment results to gain knowledge of the processes, is likewise emphasized as important factors in

several empirical studies (Saraph et al., 1989:154; Flynn et al., 1995:57; Claver & Tari, 2003:25)]. The importance of process management for SMEs is likewise acknowledged in the article by Yusof and Aspinwall (2000:187], it is though argued that fewer resources in small firms may have an influence on the investment decisions in new processes and the optimization efforts in existing processes

#### **2.3.4 Establish a culture of trust and integrity**

The importance of having a customer-focused culture throughout the organization is widely emphasized in several studies, as an understanding of customer needs and preferences is essential for the competitiveness of an organization. According to Bartley et al. (2007:9], moving towards a customer-focused culture requires listening to customers' view, analyzing, understanding, integrating and developing their expectations.

Rules and procedures must be established to allow an organization to effectively adhere to ISO 9001 standards. These rules reside in quality policies and manuals. They include definitions of responsibilities and involve documentation, inspection, calibration, testing, data collection and analysis that show how the organization takes corrective actions and what its internal auditing plans are. According to Lee, To and Yu (2009), consistency must prevail between the new practice and existing practices. Links have to be established between the organization's old policies, rules and procedures, and the new ones. For example, a full-scale organizational system including procedures for training and employee education has to be added and made consistent with the organizations' previous practices.

#### **2.4 The Relationship between Customer Focus and Service Delivery.**

When implemented and used, ISO 9001 management system should lead to better operational performance. It will be demonstrated by on-time delivery and customer satisfaction, and involve

productivity improvements (Gavin, Heras & Casadesus, 2008). Implementation consists of concept development and preparation, which must occur before a system such as ISO 9001 can be effectively used.

Implementation can be categorized along two dimensions: external coordination with customers and suppliers so that the requirements of the standard fit the needs of critical stakeholders; and internal integration, or customizing and integrating the standard with the organization's current stock of assets, that is, its existing practices (Naveh & Marcus, 2005). ISO 9001 management system is generally externally induced, in that for many companies it is a condition for doing business. Many customers require that their suppliers be certified, thus the pressure that customers exert is a reason for certification. By external coordination, ISO 9001 design and development is harmonized with the needs and expectations of customers, suppliers and other stakeholders. ISO 9001 management system provides assurances to customers that suppliers have a system of quality assurance in place (Jang & Lin, 2008). Internal integration of a standard, such as ISO 9001, means designing and developing new systems to conform to the standard based on an analysis of a company's existing internal processes. It requires integrating the standard with practices already in place. When a new practice such as ISO 9001 is introduced, the organization must find a fit between the ISO 9001 rules and its old ways of operating (Hongyi, 2000)..

#### **2.4.1 Customers' Expectations-Management Perceptions Gap**

It refers to the management's inaccurate understanding of what customers expect and what really matters to them, and is likely to result in service-delivery performance that is perceived by customers as falling short of their expectations. The necessary first step in improving quality of service is for management to acquire accurate information about customers' expectations.

#### **2.4.2 Management's Perception - Service Quality Specification Gap**

It refers to the management that had not converted their knowledge of customers' expectations into concrete performance standards (Crouch, 1990). They cite a variety of constraints they believe to be insurmountable hurdles in setting service specifications consistent with customers' expectations. In fact, the main reason for the potential gap between awareness of customers' expectations and the translation of that awareness into appropriate service standards may be the absence of wholehearted management commitment to service quality.

#### **2.4.3 Service Quality Specification - Service Delivery Gap**

It refers to the service provided to the customers failing to meet the customer's expectation even when the service quality specification had been stated. There are many reasons for the discrepancy between the service performance standards and actual service delivery. Crouch,(1990) asserts that Most of these reasons pertain to the unwillingness and or inability to contact personnel to meet the standards even when guidelines exist for performing services well and treating customers correctly. High quality service performance is not a certainty. A service performance gap is still likely due to a number of constraints (for example, poorly qualified employees. insufficient capacity to serve) (Pinar, 2003),. To be effective, service standards must not only reflect customers' expectations but also be backed up by adequate and appropriate resources (for examples. people systems and technology).

#### **2.4.4 Linking the organization's objectives to customer needs and expectations**

Customer satisfaction is an often cited reason for implementing a quality management system and is often perceived as one of the enablers for improving results. In the above definitions of TQM, it is apparent that many authors and practitioners perceive customer satisfaction as a focus area of TQM, thus naturally there is a great possibility that implementing TQM leads to increased customer

satisfaction. Hellesten and Klefsjö (2000:78] argue that increased customer satisfaction as well as reduced costs are some of the benefits underlying the implementation of quality management.

## **2.5 The Relationship between Engagement of people and Service Delivery**

There is general agreement that quality does not solely rely on the organization's ability to produce products with correct technical specifications. In order to stay competitive, the organization must be able to respond and adapt to changing customer preferences and needs (Saravanan & Rao, 2006:155]. It is thus important that every employee in the organization is involved and committed towards establishing and sustaining a high level of customer satisfaction.

### **2.5.1 Facilitate open discussion and sharing of knowledge**

According to Bartley et al. (2007:9), moving towards a customer- focused culture requires listening to customers' views, analyzing, and understanding, integrating and developing their expectations.

### **2.5.2 Communicate with people to promote understanding of their value and contribution**

According to Rahman and Bullock (2005:148), it is a necessity that both current as well as future needs of the customers are understood and met, when creating and sustaining a customer-oriented organization. This implies that the organization actively must establish a variety of mechanisms, enabling efficient ways of letting customers contact the organization with product inquiries and related questions, as well as establishing channels from which the organization can obtain knowledge about customer preferences.

### **2.5.3 Empowerment**

Competent, empowered and engaged people at all levels through the organization are essential to enhance its capability to create and deliver value. To manage an organization effectively and efficiently, it is important to involve all people at all levels and to respect them as individuals.

Recognition, empowerment and enhancement of competence facilitate the engagement of people in achieving the organization's quality objectives

#### **2.5.4 Recognition and acknowledgement of peoples' contributions, learning and improvement.**

If employees just put on a show for the auditors and revert to earlier non-compliance, it suggests that they are not really using the standard. ISO 9001 can and should become a springboard for rethinking the way a company does business and a point of departure for additional innovation. Being a catalyst for change means that ISO 9001 is used as a launching pad for new understanding about how a company does business. ISO 9001 rules become the basis for branching out, expanding and moving in new directions (Naveh& Marcus, 2005). ISO 9001:2008 is based on eight quality management principles namely customer focus, leadership, involvement of people, process approach, system approach to management, continual improvement, factual approach to decision-making; and mutually beneficial supplier relationships.

While these principles serve as the major guidelines for organizations in different parts of the world to obtain the certification, organizations may implement these principles in very different extents. For instance, it is possible that some organizations may implement the principle of customer focus in a very high level and the rest of the principles to the levels that can barely meet the requirements of ISO 9000, while others may implement all principles in very similar extents without paying extra attention to any of them. Thus, there may be variations in the implementation of the standard between ISO 9001 certified organizations (Lee, To & Yu, 2009).

#### **2.6 Empirical Studies**

Although ISO 9001 Quality Management System is new to the road sector compared to other sectors, there exist a lot of studies related to this topic.

Globally, a number of researches (Naveh & Marcus, 2005; Bell & Omachonu, 2011; Lee, To & Yu, 2009; Gavin, Heras and Casadesus, 2008; Okwiri, 2010; Prajogo, Huo & Han, 2012) have analyzed the association between ISO 9001 and performance. The main competitive edge nowadays shifts from simply applying the ISO 9001 standard to successfully implementing an effective quality management system (QMS) after obtaining the certification (Lee et al., 2009; Wahid and Corner, 2009; Psomas et al., 2013). Obviously, if service companies want to achieve business benefits and superior results, the attainment of a quality certificate to ISO 9001 should not be the end, but the starting point for deploying an effective QMS in the quest for quality improvement (Dick et al., 2001). Thus, and given the contradictory nature of the research findings regarding the successful implementation and contribution of ISO 9001 to company and financial performance, more fact-based and statistically-oriented studies in the area of the ISO 9001 QMS are required, according to Lin and Jang (2008) and Sampaio et al. (2009, 2011). Additionally, Jang and Lin (2008) and Sampaio et al. (2009) suggest examining how the depth of ISO 9001 implementation influences company performance in the long run. Augustyn and Pheby (2000), Yaya et al. (2011) and To et al. (2011) specifically highlight the need for further contextual research for the impact of ISO 9001 on operational and business performance in several service sub-sectors (e.g. e-service providers, public and tourism firms). In a research conducted in 2003 by Zeng et al., the usage of ISO 9001 in the Chinese construction sector has been evaluated by use of a survey study. %23 of 300 ISO 9000 certificated firms have participated in the survey study. According to the results of this study, it has been thought that ISO 9001 is not enough by itself in order to develop quality; it needs to be combined with Total Quality Management to provide the best contribution (Zeng et al. 2005).

Lee, To and Yu (2009) in their study of ISO 9001 in Macao, China, maintain that organizations can implement the ISO 9000 standards in different patterns. If different patterns of ISO 9001



implementation are present in practice, it would be very interesting and useful to investigate whether different patterns of ISO 9001 implementation exhibit different levels of performance or not. According to Lee, To and Yu (2009), consistency must prevail between the new practice and existing practices. Links have to be established between the organization's old policies, rules and procedures, and the new ones. For example, a full-scale organizational system including procedures for training and employee education has to be added and made consistent with the organizations' previous practices.

In Africa, Bell and Omachonu (2011) observed that a standard such as ISO 9001 must be customized to the company's needs, an activity best led by employees trained and nurtured in the company, as opposed to one led by outside consultants. Implementation is not enough, however, for a quality system such as ISO 9000 to have a long-term effect on an organization's performance. The system has to be used, on the one hand, in daily practice, and, on the other, as a catalyst for change. A study by Njehu (2006) in Ghana suggested that there are improvements in operations performance as a result of implementing the ISO 9001 standards; after examining a manufacturing firm in Nairobi however study lacked multi-organizational comparison. In addition, a study by Okwiri (2010) that sought to establish the relationship between ISO 9001 and operational performance in government agencies in Kenya concluded that the framework provided by the ISO 9001 management system standard can help optimize operational performance when the prescribed practices are applied appropriately. Naveh and Marcus (2005) found that the benefits of implementation are procedural efficiency and error rate reduction and not market share, staff motivation, or cost reduction. The ISO 9000 standard requires that firms have in-house standardized and replicable routines and procedures for product design, manufacture, delivery, service and support, but whether implementation of such a standard is helpful to organizations is not known with certainty.

## **2.7 Synthesis of the literature**

Literature indicates that organizations often lack flexibility in the design and implementation of quality management systems and show a low utilization of employee skills and knowledge. There is an interesting relationship between the reasons of implementation of ISO 9001 quality management systems and the corresponding performance outcomes. According to the literature, organizations maximize their benefits if they achieve ISO 9001 quality system implementation based on internal motivations. Organizations that pursue ISO 9001 quality management system implementation willingly and positively across a broad spread of objectives are more likely to report improved organizational performance than those organizations pursuing ISO 9000 certification in a reactionary mode due to customer pressure

Despite this there is still much debate concerning the standard's impact on firm performance, competitiveness and operations management. Singh (2008) claims that 'whilst popular, ISO 9001 is not beyond reproach. There is no clear-cut evidence of its effectiveness.' 'In general, studies investigating the effects of ISO 9001 on performance have shown mixed results' (Martinez-Costa, Martinez-Lorente, and Choi, 2008), but more importantly ISO 9001 appears to selectively affect certain types of performance (Singh 2008). Especially empirical observation on the financial and business performance impact of ISO 9001 certification have yielded inconsistent results (Singh 2008; McGuire and Dilts 2008). This implies that there is a need for better understanding of the benefits that can be achieved through implementation of ISO 9001.

From the literature reviewed, therefore, the researcher identified major gaps from the studies that showed a few authors have had little studies in this area of ISO 9001 quality management system and service delivery in the road sector. It is against this background that the current researcher found it suitable to examine the effect of Quality Management System (QMS) based on ISO 9001 on

service delivery of Project Management and Engineering Consultants Limited (PROME) in Uganda .Building on these studies, the current researcher wished to bridge the gaps identified in these studies by putting more emphasis and focus on the quality management principles of ISO 9001 with a focus on customer focus, leadership, and engagement of people while service delivery will be measured in terms of customer satisfaction, revenue and market share, efficiency and effectiveness.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

The main purpose of this study was to examine the effect of Quality Management System (QMS) based on ISO 9001 on service delivery of Project Management and Engineering Consultants Limited (PROME) in Uganda. This chapter describes the methodological parameters of the study. It presents with justification the details regarding the research paradigm, design and approach that were adopted. It also describes the research design, study population, study sample, sampling techniques, data collection methods and instruments; and the research procedure. The chapter ends with description of ethical considerations and methodological and practical challenges that were encountered in the course of the study.

#### **3.2 Research Design**

This study adopted a descriptive survey. A research design is “a blueprint for conducting a study with maximum control over factors that may interfere with the validity of the findings” (Burns and Grove, 2003:195). This design was used to obtain information concerning the current status of the phenomena to describe "what exists" with respect to variables or conditions in a situation (Cooper and Schindler, 2008). The study was both quantitative and qualitative in nature. The qualitative approach was used to describe subjective assessments, analyses and interpretation of opinions, and behaviours of the respondents as expressed verbatim from interviews and focus group discussions (Mugenda and Mugenda, 1999). The quantitative methods were used in generating numerical data, which was statistically manipulated to meet required objectives through descriptive statistics (frequencies and percentages (Amin 2005:24). This is because there was need to outline some information statistically in order to bring out the statistical aspects of the study clearly.

### 3.3 Study Population

Akuezilo (1993: 43) describes it as including ‘people, events, animals and objects who/which are members of the target of the study’. This study was based on a sample of 86 participants comprising directors, project engineers/technicians, administrative staff and support staff at PROME Consultants

### 3.4 Sample Size Determination

Mugenda and Mugenda (1999) define a sample as a sub set of a particular population in a given study. Sampling is the process of selecting sufficient numbers of elements from the population so that a study of the sample and its characteristics would make it possible for the researcher to generalize such characteristics to the population elements (Sekeran, 2003). This study was based on a sample of 86 participants comprising directors, project engineers/technicians, administrative staff and support staff at PROME Consultants as shown in Table 1 below.

**Table 1: Categories of study participants**

No.	Category of respondents	(N)	(S)	Sampling technique
1	Directors	15	14	Purposive sampling
2	Project engineers/technicians	30	28	Stratified sampling
3	Administrative staff	10	7	Stratified sampling
4	Support staff	50	44	Simple Random sampling
	<b>Total</b>	105	93	

**Key:** *N* – Population Size, *S* – Recommended Sample Population *Krejcie & Morgan (1970)*..

### 3.5 Sampling Technique

In this study purposive, stratified and simple random sampling techniques were adopted.

Parahoo (1997:232) describes purposive sampling as “a method of sampling where the researcher deliberately chooses who to include in the study based on their ability to provide necessary data”. The rationale for choosing this approach was that the researcher would be seeking knowledge about the respondents’ opinions.

*Simple random sampling* is a strategy that adds credibility to a sample when the potential purposeful sample is larger than one can handle whereby it uses small sample sizes, thus the goal is credibility, not representativeness or the ability to generalize (Patton, 2001). This sampling technique was chosen because each member in this population had an equal chance of being included in the sample.

*Stratified sampling* is a sample that focuses on characteristics of particular subgroups of interest and facilitates comparisons. Stratified sampling on the other hand implies that samples are taken from every segment of the population (Roche,2002). The samples are taken within samples, except the sample size is typically much smaller and “stratified” a sample based on a characteristic (Patton, 2001). This technique enabled the researcher to determine desired levels of sampling precision for each group, and provided efficiency.

### **3.6 Data Collection Methods**

Data for this study was derived from both primary and secondary sources and collected using documentary reviews, questionnaires, key informant interviews, and direct observation of some of the activities going on as described below.

#### **3.6.1 Documentary Reviews**

As explained in Bowen (2009) document analysis is a social research method which is used as a tool for obtaining relevant documentary evidence to support and validate facts stated in a research, especially during literature review. It involves analytic reading and review of lots of written material. In this study, the researcher reviewed various documents related to use of ISO 9001 management

systems in projects to complement data from other sources. Although documents are associated with a number of challenges such as the need for consent, inaccessibility and obsolescence, Hardon, Hodgkin and Fresle (2004) defend their uses because they are a cost-efficient way of doing research and tend to avoid duplication of efforts.

### **3.6.2 Key Informant Interviews**

Amin (2005) describes an interview as an oral questionnaire where the investigator gathers data through direct verbal interaction with participants. In the light of this, key informant interviews were conducted with people who know what is going on at PROME Consultants. In this study, 10 key informant interviews were conducted to get data from people who are knowledgeable about ISO 9001.

### **3.6.3 Survey Method**

Kombo and Tromp (2006) define a questionnaire as a data collection instrument used to gather data over a large sample or number of respondents. The first section of the instrument addressed issues of demographic data, and other themes related to the study. In each section, the respondents were given clear instructions on how to complete the questions.

### **3.6.4 Observation**

McLeod (2015) describes observation method as the process of watching what people do for purposes of collecting data. There are different types some of which are controlled observation, naturalistic observation and participant observation. He notes that observations can either be overt or disclosed, in which case the participants know they are being studied; or covert/undisclosed where the research keeps their real identity a secret from the research subjects, acting as a genuine member of the group. Although observation is criticized for pretense on the part of some participants when they realize that they are being observed, it is advantageous because data obtained through structured

observations is easier and quicker to analyze, making this a less time consuming method as compared to naturalistic observations.

### **3.7 Data Collection Instruments**

#### **3.7.1 Documentary review checklist**

As explained in Bowen (2009) documentary review checklist is a social research method which is used as a tool for obtaining relevant documentary evidence to support and validate facts stated in a research. It indicates the various types of literature reviewed in the context of the study.

#### **3.7.2 Interview Guide**

McNamara (2009) defines an interview guide as a set of questions that the researcher asks during the interview. An interview guide was designed based on the objectives of the study and this comprised questions intended to lead the respondents towards giving data to meet the study objectives .

#### **3.7.3 Questionnaire**

A questionnaire is a data collection instrument used to gather data over a large sample or number of respondents (Kombo and Tromp, 2006). A structured questionnaire was developed following recommended guidelines by various scholars that include Kothari (2005), Sekaran and Bougie (2010) and Saunders et al (2009).The selection of these instruments was guided by the nature of data to be collected, the time available and the objectives of the study.

### **3.8 Validity of the instruments**

Validity refers to accuracy in measurements to ensure that a particular data collection instrument actually measures what it was intended to measure or the extent to which inferences or conclusions drawn from data are reasonable and justifiable (UNDP, 2009, p. 54). To avoid this problem as much as possible, notes were taken during the interviews and the data was then compiled and transformed it into precious information. In addition, a pilot study was conducted to determine



whether the questions were valid, understandable and answerable. This increased the validity as well as the reliability of the study (Dul And Hak 2008)

### **3.9 Reliability of the Instruments**

Golafshani (2003) and Lincoln and Guba (1985) discuss the reliability issues in qualitative research and identify credibility, neutrality, confirm ability, consistency, dependability, applicability, transferability as the essential criteria for quality in qualitative research. Mays and Pope (2000) add that validity of qualitative research should be addressed through triangulation, respondent validation, clear exposition of methods of data analysis, reflexivity, careful attention to negative cases and fair dealing. Hence, validity and reliability in the proposed study was addressed in accordance with the parameters suggested in various literature on the subject (Lincoln & Guba, 1985; Mays & Pope, 2000).

### **3.10 Data Analysis**

In the light of the research design and approach proposed, data in this study was analyzed using mainly qualitative methods described in Creswell (1998). The data collected was checked for completeness, coded and tabulated before final analysis. Descriptive statistics were used to calculate, calibrate the spread and the mean location of responses for each of the independent and the dependent variables. Correlation analysis was applied to measure the strength and direction of the relationship between the independent variables which included external co-ordination, internal integration, use in daily practice and catalyst for change and the dependent variable deduced as the operational performance. Student t-test was used to test whether there were significant differences in the adoption of the ISO 9001 quality assurance standards between the internally motivated organizations and the externally motivated organizations.

### **3.11 Procedure for Data Collection**

The researcher sought approval of the research topic by the supervisor. A research proposal and research instrument were designed to aid data collection and after of the a successful defense the researcher to seek an introductory letter and research clearance letters from UTAMU and National Council for Science and Technology of Uganda as part of the ethical requirement. These letters were used to introduce her to gatekeepers and targeted research participants in the course of collecting data. Participants were provided with a consent form for signing to acknowledge their willingness to participate in the study. Detailed field notes were taken and edited after every day's work. The data was organized, cleaned and used to compile a report to be submitted.

### **3.12 Measurement of Variables**

The variables were measured using nominal and ordinal types of measurements. The questionnaires specifically for respondents were measured on a five interval Likert Scale, the level of agreement was ranked as strongly agree, which reflected more agreement than just agreement or strongly disagree compared to just disagree. The numbers in the ordinal scale represented relative position or order among the variables (Mugenda & Mugenda, 1999; Amin, 2005).

### **3.13 Ethical Considerations**

The researcher first sought the consent of the respondents, assured them of anonymity, and the confidentiality with which the data collected was to be kept and accessed. Ethical issues in a study focus on relationships with research participants in terms of dos and don'ts a researcher must observe while in the field such as choice of field sites; providing feedback; clarifying the rights and 'ownership' of evaluation outputs; ensuring confidentiality and avoiding endangering participants; and maintaining the independence of the evaluation were taken into consideration.

## CHAPTER FOUR

### PRESENTATION AND DISCUSSION OF THE FINDINGS

#### 4.1 Introduction

The main objective of this study was to examine ISO 9001 Quality Management System and service delivery in the road sector, a case of PROME consultants Ltd. This chapter therefore presents the findings as well as the discussion on them. Questions were posed to calibrate how leadership support, customer focus and engagement of people influence service delivery.

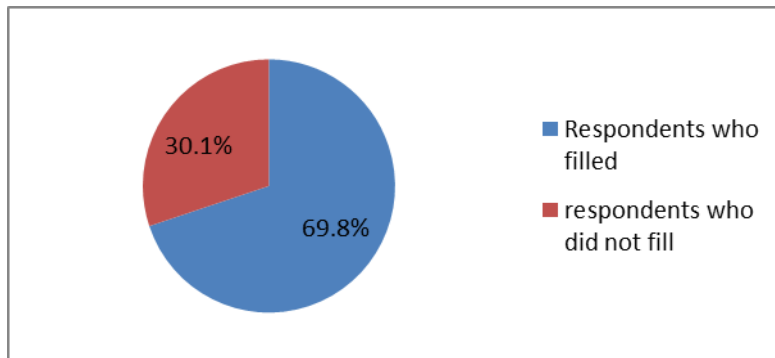
#### 4.2 Presentation of the findings

The section begins with the response rate, socio-demographic characteristics of the respondents and the major findings as obtained from the field.

##### 4.2. Response rate

The study distributed 93 questionnaires to sampled staff working at PROME Consultants Ltd. Out of those, 65 sample respondents filled in and returned the questionnaire while 28 respondents did not return the questionnaire, representing 69.8% response rate. The response rate demonstrates a willingness of the respondents to participate in the study

**Chart 4.1: Response rate**



Source: Field data

### 4.3 Socio-demographic Characteristics of the Respondents

#### 4.3.1 Gender of the Respondents

The findings on the gender of the respondents are presented in Table 4.1:

**Table 4.1: Gender of the Respondents (N=65)**

Variable	Frequency	Percentage
Male	40	61.5%
Female	25	38.5%
Total	65	100%

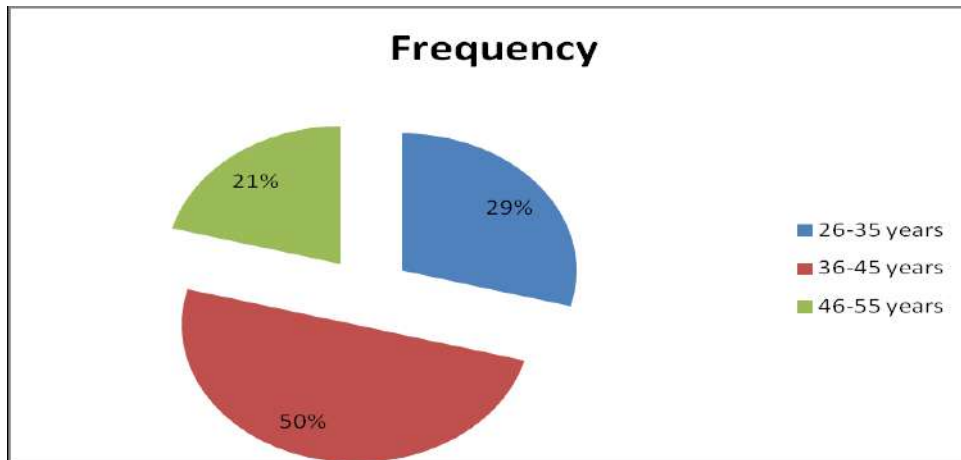
**Source: Field Data, (2016)**

The information in Table 4.1 shows that 40 (61.5%) of the respondents were male while 25(35.5%) respondents were female.

#### 4.3.2 Age Range of the Respondents

The respondents were required to indicate their age range. The responses are presented in Table 4.2. The study results reveal that 50% of the respondents were aged between 36 and 45, 29% of the respondents indicated that they were aged between 26 and 35, while 21% of the respondents indicated that they were aged between 46 and 55. These findings indicate that majority of the employees at PROME Consults are middle-aged and elderly. This implies that these are experienced employees who could give the relevant information to the study area. The results are as shown in Chart 4.2

**Chart 4.2 Age distribution of respondents**



Source: Field Data (2016)

#### 4.3.3 Highest Educational Qualification of the Respondents

The study also sought from the respondents about their educational level. The findings are presented in Table 4.2.

**Table 4.2 Highest Level of Education (N=65)**

Education level	Frequency	Percentage
Certificate & below	0	-
Diploma	10	15.4%
Bachelors	30	46.4%
Masters	22	33.8%
Phd	3	4.6%

Source: Field Data (2016)

In Table 4.2, the study results reveal that , 30 (46.4%) of the respondents had a university degree, 22 (33.8%) respondents had the Master’s qualification, while 3 (4.6%) respondents had PhDs, and 10 (15.4%) had diplomas.

#### 4.3.4 Marital Status of the Respondents

Information on the marital status of the respondents is presented in Table 4.3.

**Table 4.3 Marital Status (N=65)**

<b>Marital status</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Married</b>	<b>45</b>	<b>69.2%</b>
<b>Single</b>	<b>10</b>	<b>15.4%</b>
<b>Divorced</b>	<b>5</b>	<b>7.7%</b>
<b>Separated</b>	<b>-</b>	<b>-</b>
<b>Widow</b>	<b>5</b>	<b>7.7%</b>
<b>Others</b>	<b>-</b>	<b>-</b>

**Source: Field Data, (2016)**

Table 4.3 shows that 45 (69.2%) respondents were married, 10 (15.4%) respondents were single, while 5 (7.7%) respondents were divorced and 5 (7.7%) were widowed. As shown in Table 4.4, the majority of respondents were married.

#### 4.4.1 How Leadership support influences Service delivery at PROME Consults

The first research question aimed to understand how leadership support influences service delivery at PROME Consultants. The researcher required the respondents to indicate the extent to which leadership support influenced service delivery. The findings are as presented in Table 4.4.

**Table 4.4: Extent to which leadership support influences service delivery**

Item	Frequency	Percentage %
Very great extent	45	69.2
Great extent	5	7.7
Moderate extent	2	3.1
Low extent	3	4.6
Very low extent	10	4
Total	65	100

From the findings shown in Table 4.4, 5 (7.7%) of respondents indicated that leadership support influence service delivery to a great extent. 45(69.2%) indicated a very great extent influence, 2(3.1%) indicated a moderate extent influence, 3(4.6%) said it influenced it to a low extent, while the remaining 10(4 %) indicated that it influenced it to a very low extent. This implies that leadership focus truly influences service delivery.

According to Edhoven (2005:23) leaders establish unity of purpose and direction of the organization. This creates and maintains the internal environment in which people can become fully involved in achieving the organization's objectives. The transition is changed from aggravation to motivation. The leadership principle is reflected in ISO 9001 through the requirements addressing: the setting of objectives and policies; planning; internal communication: and creating an effective work environment

Key components of Leadership Support were analyzed to understand how they influence service delivery and the findings are as presented below. Based on the scale of five (5), respondents were required to tick against the response which they felt best suited the question. Findings of this item are as shown in Table 4.5

**Table 4.5 Extent to which the key components of leadership support affect service delivery**

Variables	SA		A		N		D		SD		
	Fre	%	Fre	%	Fre	%	Fre	%	Fre	%	
<b>Leadership support</b>											
Organization wide commitment	5	7.7	10	15.4	20	30.7	25	38.5	5	7.7	
Communicating mission, vision & strategy	5	7.7	10	15.4	20	30.7	25	38.5	5	7.7	
Providing resources, training & authority	10	15.4	20	30.7	25	38.5	5	7.7	5	7.7	
Establish a culture of trust and integrity	13	20	12	18.5	20	30.8	1	1.5	10	15.4	
<b>Mean</b>	<b>8.3</b>	<b>12.7</b>	<b>13</b>	<b>12.3</b>	<b>21.3</b>	<b>32.7</b>	<b>14</b>	<b>21.5</b>	<b>6.3</b>	<b>9.6</b>	

*Source: Primary Data*

From the findings 32.7% of the respondents were undecided (Not sure) leadership support components influenced service delivery, 21.5% disagreed that leadership support influenced service delivery while 12.7 % strongly agreed and 9.6 % strongly disagreed to the above statement in relation to leadership support. This indicates that for a company to fully implement ISO 9001 QMS Leaders



need to establish unity of purpose and direction of the organization. They should create and maintain the internal environment in which people can become fully involved in achieving the organizations’

**4.4.2 How Customer Focus influences service delivery at PROME Consults**

The second research question sought to understand how customer focus influences service delivery at PROME Consults. The researcher required the respondents to indicate the extent to which customer focus influenced service delivery. The findings are as presented in Table 4.6

**Table 4.6: Extent to which leadership support influences service delivery**

Item	Frequency	Percentage %
Very great extent	50	76.9
Great extent	3	4.6
Moderate extent	2	3.1
Low extent	3	4.6
Very low extent	7	10.7
Total	65	100

From the findings shown in Table 4.6, 3 (4.6%) of respondents indicated that customer focus influenced service delivery to a great extent, 50(76.9%) indicated a very great extent influence, 2(3.1%) indicated a moderate extent influence, 3(4.6%) said it influenced it to a low extent while the remaining 7(10.7 %) indicated that it influenced it to a very low extent. This implies that customer focus positively influences service delivery.

Organizations depend on their customers and therefore should understand current and future customer needs, should meet customer requirements and strive to exceed customer expectations (Ruel & Water,2001:12). Lee (2009:25) argues that the transition is changed from inward-seeking focus to outward-seeking focus. The customer focus principle is reflected in ISO 9001 through the requirements addressing: communication with the customer; care for customer property; the determination of customer needs and expectations; appointment of a management representative; and management commitment.

Key components of customer focus were analyzed to understand how they influence service delivery and the findings are as presented below. Based on the scale of five (5), respondents were required to tick against the response which they felt best suited the question. Findings of this item are as shown in Table 4.7.

**Table 4.7 Extent to which the key components of customer focus influence service delivery**

Variables	SA		A		N		D		SD	
	Fre	%	Fre	%	Fre	%	Fre	%	Fre	%
<b>Customer focus</b>										
Customer expectation	20	30.7	12	18.4	8	12.3	10	15.4	15	23.1
Customer perception	25	38.5	15	23.1	5	7.6	10	15.4	10	15.4
Relationship management	15	23.1	10	15.4	8	12.3	12	18.4	20	30.7
Linkage between objectives and expectations	10	15.4	14	21.5	15	23.1	20	30.7	6	9.2
<b>Mean</b>	<b>20</b>	<b>26.9</b>	<b>12.7</b>	<b>19.6</b>	<b>9</b>	<b>13.8</b>	<b>13</b>	<b>19.9</b>	<b>13</b>	<b>20</b>

*Source: Primary Data*

From the findings, 9(13.8%) of the respondents were undecided (Not sure) whether customer focus and its components influenced service delivery, 13(19.9%) disagreed that customer focus influences service delivery while 20(26.9%) strongly agreed and 13(20%) strongly disagreed to the above statement in relation to customer focus.

#### 4.4.4 The relationship between Engagement of people and service delivery at PROME Consults

The third research question aimed to understand the nature of relationship between engagement of people and how it influences service delivery at PROME Consults. The researcher required the respondents to indicate the extent to which engagement of people influenced service delivery. The findings are as presented in Table 4.8.

**Table 4.8: Extent to which engagement of people influences service delivery**

Item	Frequency	Percentage %
Very great extent	20	30.7
Great extent	20	30.7
Moderate extent	5	7.6
Low extent	10	15.4
Very low extent	10	15.4
Total	65	100

From the findings shown in Table 4.8, 20 (30.7%) of respondents indicated that engagement of people influenced service delivery to a great extent. 20(30.7%) indicated a very great extent

influence, 5(7.6%) indicated a moderate extent influence, 10(15.4%) said it influenced it to a low extent while the remaining 10(15.4%) indicated that it influenced it to a very low extent. This implies that engagement of people also positively influences service delivery.

Marcus (2005:40) argues that the transition is changed from operate to cooperate. The involvement of people principle is reflected in ISO 9001 through the requirements addressing: participation in design reviews; defining objectives, responsibilities and authority; creating an environment in which people are motivated; internal communication; and identifying competence needs. People at all levels are the essence of an organization and their full involvement enables their abilities to be used for the organizations benefit (Gavil eta l,2008:28)

Key components of engagement of people were analyzed to understand how they influence service delivery and the findings are as presented below. Based on the scale of five (5), respondents were required to tick against the response which they felt best suited the question. Findings of this item are as shown in Table 4.9.

**Table 4.9 Extent to which the key components of engagement of people influences service delivery**

Variables	SA		A		N		D		SD	
	Fre	%	Fre	%	Fre	%	Fre	%	Fre	%
<b>Engagement of people</b>										
Facilitate open discussion	5	7.7	10	15.4	20	30.7	25	38.5	5	7.7
Communication with people	5	7.7	10	15.4	20	30.7	25	38.5	5	7.7
Recognition and acknowledgement	10	15.4	20	30.7	25	38.5	5	7.7	5	7.7

<b>Mean</b>	<b>6.6</b>	<b>10.3</b>	<b>13.3</b>	<b>20.5</b>	<b>21.6</b>	<b>33.3</b>	<b>18.3</b>	<b>28.2</b>	<b>5</b>	<b>7.7</b>
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*Source: Primary Data*

From the findings, 33.3 % of the respondents were undecided (Not sure) whether engagement of people influenced service delivery, 28.2% disagreed that engagement of people influenced service delivery, while 10.3% strongly agreed and 7.7% strongly disagreed to the above statement in relation to engagement of people.

#### **4.4.7 Trend of Service delivery**

The study required the respondents to rate the trend of the given factors of service delivery. The statements were on a scale of 1-5 where 1=greatly improved, 2-improved, 3-constant, 4=deteriorated and 5=greatly deteriorated. The results are summarized in table 4.10.

**Table 4.10: Trend of service delivery**

	Mean	SD
Effectiveness	4.01	0.322
Efficiency	3.46	0.057
Customer satisfaction	2.43	0.671
Revenue and market share	4.11	0.089

As shown in Table4.10, the respondents gave feedback that there was efficiency and effectiveness in service delivery (4.01), effectiveness control (3.46),customer satisfaction (2.43),revenue and market share all seem to imply that there is improvement as result of implementation of ISO 9001 QMS.

Lee To and Yu (2009) posit that organizations should not perceive certification as a single one time project and the maintenance of the standard as routine processes. Managers should be committed to adhering to the standard and sustain it in their day to day operations.

#### 4.6 Adoption of ISO 9001 and Service delivery

Questions were posed to calibrate how the sampled respondents perceived the impact of adoption of ISO 9001 on service delivery. The results are as shown in the table below:

**Table 4.11: Operational Performance Results**

Factor	Frequency	Mean score	Variance	Std
Cost efficiency (OP1)	65	3.8	0.81	0.9
Timeliness due to adopting the system (OP2)	65	3.9	0.81	0.9
Quality of service (OP3)	65	3.8	0.81	0.9
Customer satisfaction (OP4)	65	3.9	0.81	0.9
Service reputation (OP5)	65	3.8	1.21	1.1
Total		3.84	4.45	2.11

The range of the responses was between 1 (No Extent) to 5 (Very Large Extent). The mean response was 3.84 (SD=2.11). This is an indication that the sampled organizations to a large extent perceived that implementing ISO 9001 had a positive effect on their service delivery. According to Naveh and Marcus (2005) an organization should experience better service delivery after implementing the ISO 9001 standard. There should be lower defect rates, higher productivity, on-time delivery, reduction in the cost of quality and improved customer satisfaction.

## **CHAPTER FIVE**

### **SUMMARY OF THE FINDINGS, CONCLUSION AND RECOMMENDATIONS**

#### **5.1 Introduction**

The main concern of this study was to examine the effect of Quality Management System (QMS) based on ISO 9001 on service delivery of Project Management and Engineering Consultants Limited (PROME) in Uganda. This chapter presents the summary, conclusions, limitations and recommendations.

#### **5.2 Summary of Findings**

The first objective of this study was to establish how leadership support influenced service delivery at PROME Consultants. These organizations are becoming increasingly important in both developing and developed economies in terms of revenue generation and employment opportunities. The results indicate that there is a potentially positive relationship between the two sets of variables as further discussed below.

##### **5.2.1 How leadership support influences service delivery**

On whether leadership support influenced service delivery, most respondents (93%) agree it affects quality management practices to a large extent. Leaders establish unity of purpose and direction of the organization. They should create and maintain the internal environment in which people can become fully involved in achieving the organization's objectives. The transition is changed from aggravation to motivation. The leadership principle is reflected in ISO 9001 through the requirements addressing: the setting of objectives and policies; planning; internal communication; and creating an effective work environment.

### **5.2.2 How customer focus influences service delivery**

On whether customer focus as an indicator of quality management practices influences service delivery, (48%) of the respondents agreed that organization to a large extent established and understood current and future needs of the customer. Fifty per cent (50%) of the respondents also agreed to a large extent that organizations communicated and balanced needs of all interested parties. On responses to customer complaints, most respondents (45%) agreed that the response was done to a moderate extent. Overall, there was a relationship between customers focus and service delivery.

### **5.2.3 The relationship between engagement of people and service delivery**

It was observed that people at all levels are the essence of an organization and their full involvement enables their abilities to be used for the organization's benefit. The transition is changed from operate to cooperate. The involvement of people principle is reflected in ISO 9001 through the requirements addressing: participation in design reviews; defining objectives, responsibilities and authority; creating an environment in which people are motivated; internal communication; and identifying competence needs. This ensures continued loyalty and high customer satisfaction and service delivery. It is therefore imperative that public sector organizations which aim at improving their service delivery initiate sustainable continuous improvement processes to guarantee quality and high service levels.

## **5.3 Discussions**

These findings are assisted by the studies mentioned in the previous section. As it appears, the highest quoted factor that impedes the ISO 9001 implementation is top management commitment. Lack of top management commitment as a barrier was also reported by Hesham and Magd (2007), Magd (2007), Escanciano et al. (2001), and Wiele et al. (2005). Lack of management commitment could be attributable to several factors: low education on quality, high top management turnover, and



low leadership dedication to quality. The implementation of ISO 9001 can affect the whole organization, and if top management shows total dedication to quality programmes, it leads to an atmosphere of continuous improvement. Top management must be convinced that the registration and certification shall enable the organization to communicate to its customers a clear commitment to quality. It should understand that a QMS shall improve the business efficiency by eliminating non value added processes. In addition, top management should demonstrate its commitment to ISO 9001 through: communicating to the organization the necessity of meeting customer and statutory requirements, defining the organization's quality policy and make it known to everyone in the organization, and insuring that quality objectives are disseminated to all levels of the organization. Some suggested actions that may be taken by top management are: participating in improvement projects, leading the organization by example, and creating an atmosphere to encourage people's participation.

The second most important barrier seen by respondents was the employee resistance. A similar finding was concluded by Psomas et al. (2010). The employee resistance may come from the fear caused by a lack of information about ISO 9001 requirements, and from the belief that it will be difficult to change the mindset of employees regarding quality programmes. Therefore, employee understanding and support to ISO 9001 are critical to its success. Another important barrier reported by the sample surveyed is the difficulty of performing internal audit. This factor was also found to be important by Sousa-Poza et al. (2009). Internal auditing is used as a means of improvement and to confirm compliance with the requirements of the standards. Audit findings direct the attention of management to the areas where action is required. Lack of experience in performing internal audits is attributed to lack of understanding of the QMS, employee's level of education, lack of training, and low worker morale. It was also uncovered in this study that the

Absence of consulting boards is a major limitation to the effective application of ISO 9001. In fact there does not exist any foreign certifying board or any consulting agency in Iraq that can certify the Iraqi organizations for ISO 9001.

The majority of respondents (76%) believed that ISO 9001 requirements are unrealistic. This finding is attributable to several reasons such as: quality is realized through inspection, the standards cause sub-optimization of performance, the standards depend on people's interpretation of quality, and the standards create bureaucracy that the organization was better off without it (Seddon, 1998). Another factor that was reported by respondents is the lack of financial resources to mobilize the implementation of ISO 9001. Funds are needed to institute training programmes, provide quality

#### **5.4 Conclusions**

Based on the findings of this study we can conclude that in order for an organization to successfully implement a quality management system, the top management must create, share and sustain quality management targets and values. The top management must also demonstrate visible commitment to quality issues since this influences success of the quality management practices. The study findings also conclude that top management must commit sufficient resources for successful implementation of quality issues. These findings are similar to those done in Malaysia in the electrical industry by Yousof in 2003.

The study findings also conclude that for a successful quality management, customer focus must be embedded within the organization. These findings are similar to those by Lehmann (1994) on customer satisfaction, market share, and profitability in Sweden. The study findings indicate that for successful quality management practice, an organization needs to establish a process of

understanding current and future needs of its clients, ensure efficient management response to customer complaints and a consistent tracking and measuring of customer satisfaction through surveys.

### **5.5 Limitations of the Study**

The study was cross-sectional in nature and the snapshot views may not explicitly show the relationship between adoption of ISO 9001 and service delivery. Furthermore perceptual measures of performance and implementation were used which may have resulted in bias or ineffective calibration as a result of the respondents' dispensations.

Improvements to the operational performance of service organizations that have implemented the ISO 9001 could be attributed to the fact that while an organization is preparing for the implementation, it has to describe its processes. Doing this and probably for the first time it can become clear that its processes have defects which can lead to improvements. These improvements may lead to better operating performance. In such a case, it can be inferred that it is the attention and adjustments on the processes that lead to improvements rather than the adoption of a quality management standard. Any reason to look at the processes in an organization can lead to improvements.

### **5.6 Recommendations**

Though individual organizations in Uganda can benefit from the study's findings, practical implications resulting from this study are of particular relevance to the Government and the public sector in general that wish to improve their service delivery through implementation of quality management practices. Hence the following recommendations were made:

The corporations within the road sector need to focus on the identified factors namely; top management commitment, continuous improvement of products and services, customer orientation and adoption of process approach in successful implementation of quality management practices as expected by the parent ministry acting on behalf of the government. Successful implementation of a quality management system according to 9000 standards requires appropriate programme formulation. The ISO 9001:2008 standard explicitly requires that all processes and procedures be established, documented, implemented and maintained. For this purpose, explicit knowledge is very useful. Explicit knowledge refers to knowledge that is recognized and embodied in various organizational routines, i.e. manuals, procedures, instructions, standards, protocols, etc. This type of knowledge can be easily acquired and transferred. For quality management programmes and quality models, more useful and more popular is explicit knowledge

The study also recommends continued capacity building for all Public Corporations on quality management practices in matching their respective environments for improvement. It has been established that the implementation of ISO 9001 is beneficial in terms of improving the operational performance. Managers should be aware that adoption of ISO 9001 is effective in organizations. It provides a framework for building a quality management system .

Correct maintenance of a quality management system during the post-certification period is very important. During this period, emphasis should be placed on activities such as management reviews, corrective and preventive actions, internal and external audits, collection and analysis of data, measurement of performance, and continuous improvement.

### **5.7 Limitations of the study**

This study sought to examine the effect of Quality Management System (QMS) based on ISO 9001 and service delivery in the road sector, the researcher felt that the interviews were subject to subjectivity as individuals may not have been fully open about some issues they felt were sensitive. Most of the staff working at PROME consultants could not easily be accessed as they were oftentimes in the field.

### **5.8 Contributions of the study**

This work supplements previous literature reviews (Psomas & Fotopoulos, 2009; Sampaio et al., 2009) expanding them because it includes in a single study both standards and suggests ideas not analyzed in the previous literature reviews related to other issues such as internalization and selection effect. In addition, the work can be used in teaching to explain better all the benefits of both standards and in which circumstances there is a greater probability that these benefits should happen. Also, it contributes to the academic literature showing the most common benefits between the two standards to examine in future research, as well as some differences between the two standards

### **5.9 Recommendations for Further Research**

Longitudinal studies should be conducted while utilizing objective measures of performance to further test the impact of adopting ISO 9001 for a longer period of time. This would help to gain better insight into the impact of such an international standard on domestic organizations. Second, future studies should consider other variables to explain better these relationships such as motives for certification and/or the level of internalization of both standards. Third, future studies also could supplement these studies. Examining the selection effects .studies about integration could be interesting due to the similarities between the two standards

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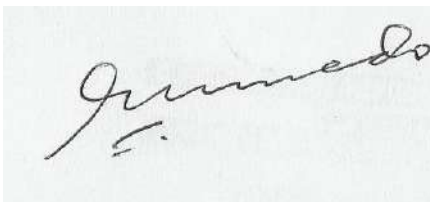
**KAMPALA**

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**22 September 2016**

**CERTIFICATE OF PROOF THAT DISSERTATION HAS BEEN EDITED**

This is to certify that the Master's Degree dissertation entitled, **ISO 9001 Quality Management System and Service Delivery in the Road Sector: A Case of Project Management Engineering Consultants Limited (PROME) in Uganda by Prize Ahumuza**, has been reviewed and corrected in order to ensure clarity of expression and consistency regarding key style aspects like general grammar, sentence structure to ensure logical flow and effectiveness of meaning, all-round punctuation, use of tenses in methodology and reporting, consistency in use of names and titles, orderliness in word spacing and formatting, citation and referencing.

A handwritten signature in black ink on a light-colored background. The signature is cursive and appears to read 'Mukotani Rugyendo'.

**Mukotani Rugyendo**

**Professional Editor**

## **APPENDIX I: QUESTIONNAIRE**

**Research Title: “ISO 9001 QUALITY MANAGEMENT SYSTEM AND SERVICE DELIVERY IN THE ROAD SECTOR: A CASE OF PROJECT MANAGEMENT AND ENGINEERING CONSULTANTS LIMITED (PROME) IN UGANDA”.**

Dear Respondent,

I am a student of Uganda Technology and Management University, pursuing an EXECUTIVE MASTERS IN BUSINESS ADMINISTRATION. The questionnaire is intended to help the researcher get information necessary for examining the effect of Quality Management System (QMS) based on ISO 9001 on service delivery of Project Management and Engineering Consultants Limited (PROME) in Uganda. The purpose of the study is purely academic and information given will be treated with the highest degree of confidence. You have been selected as a key respondent for this study. Kindly, complete the questionnaire to enable the researcher complete the study. Please tick the answer which represents your opinion on the subject.

I appreciate your participation in this effort.

Thank you,

**Prize Ahumuza**

**School of Business and Management**

**Section A: BACKGROUND INFORMATION**

Please tick or circle the appropriate number

<b>1</b>	<b>AGE (Years)</b>				
	Less than 25 years	26 – 35 years	36 – 45 years	46 -55 years	56yrs and above
	1	2	3	4	5

<b>2</b>	<b>SEX</b>	
	Female	Male
	1	2

<b>3</b>	<b>Position</b>			
	Head of Department	Academic Staff	Administration Staff	Support Staff
	1	2	3	4

<b>4</b>	<b>EDUCATION QUALIFICATION</b>					
	PhD	Masters	Bachelors	Diploma	Certificate	Others

						(Specify)
	1	2	3	4	5	6

**5 Respondents Marital Status**

Marital Status	Tick	Measure
Married		1
Single		2
Divorced		3
Separated		4
Widow		5
Others		6

6	<b>DURATION OF SERVICE AT PROME CONSULTS</b>			
	Less than 5 years	5 – 10 years	11 – 16 years	17 years and above
	1	2	3	4

From questions 1 – 61, tick or circle the number that best indicates your opinion on the question using the following scales:

The extent to which;

SCALE	1	2	3	4	5			
	SD	D	N	A	SA			
	<b>Leadership support</b>			<b>SD</b>	<b>D</b>	<b>N</b>	<b>A</b>	<b>SA</b>
1	Organization wide commitment			1	2	3	4	5
2	Communicating, mission, vision & strategy			1	2	3	4	5
3	Providing resources, training & authority			1	2	3	4	5
4	Establish a culture of trust and integrity			1	2	3	4	5
	<b>Customer focus</b>			<b>SD</b>	<b>D</b>	<b>N</b>	<b>A</b>	<b>SA</b>
1	Customer expectation			1	2	3	4	5
2	Customer perception			1	2	3	4	5
3	Relationship Management			1	2	3	4	5
4	Linkage between objectives and expectation			1	2	3	4	5
	<b>Engagement of People</b>			<b>SD</b>	<b>D</b>	<b>N</b>	<b>A</b>	<b>SA</b>
1	Facilitate open discussion & sharing			1	2	3	4	5
2	Communication with people Empowerment			1	2	3	4	5

3	Recognition & Acknowledgement	1	2	3	4	5
	<b>Service delivery</b>	<b>SD</b>	<b>D</b>	<b>N</b>	<b>A</b>	<b>SA</b>
1	Effectiveness	1	2	3	4	5
2	Efficiency	1	2	3	4	5
3	customer satisfaction	1	2	3	4	5
4	Revenue & market share	1	2	3	4	5

**Section C**

a. What led your organization to adopt the ISO 9001 quality management standard in terms of internal or external requirements?

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b. Are there any other quality initiatives established after the adoption of ISO 9001? YES/NO Tick one. If yes briefly explain



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c. What do you think are the major resources required in adopting the ISO 9001 quality management systems?

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**Thank you for your participation**

**APPENDIX II:INTERVIEW GUIDE**  
**ISO 9001 QUALITY MANAGEMENT SYSTEM AND SERVICE DELIVERY IN THE ROAD**  
**SECTOR: A CASE OF PROJECT MANAGEMENT AND ENGINEERING CONSULTANTS**  
**LIMITED (PROME) IN UGANDA”**

The purpose of the interview is to gather personnel officers' views on the ISO 9001 adoption and intergration at PROME consultants and how it affects service delivery with specific reference to road sector.

1. What have you done as PROME Consults management to improve on service delivery in the road sector?
2. To what extent has ISO 9000 led to the discovery of improvement opportunities?
3. To what extent was the design and development of your ISO 9000 system a springboard to introduce new practices? Has it become part of your regular routine?
4. Are the documents created for the purpose of ISO 9000 registration used in daily practice?
5. Are preparations for ISO external audits made at the last minute? How do employees perceive the effectiveness of ISOO 9001?

### **APPENDIX III: Paraphrase of the ISO 9001 Standard**

Clauses required for the various subsystems

1. A system of management for the quality system, including a policy, organization, assigned responsibilities and a review mechanism that involves senior management.
2. A documented plan for the quality system.
3. A system to ensure that customer and suppliers clearly understand and agree to their contract.
4. A system to control and verify the design to ensure that it meets specified requirements.
5. A system to prevent errors due to inadequate or out-of-date documentation.
6. A system to ensure deliberate purchasing decisions and the use of qualified suppliers.
7. A system to safeguard any materials that are entrusted to the supplier by the customer.
8. A system to trace units of product through production (if required by the sales contract).
9. A system to ensure that the produce is made in a known, planned and repeatable fashion.
10. A system to ensure that any necessary inspections and testing is diligently carried out.
11. A system to ensure that key measuring equipment is properly maintained and calibrated.
12. A system to keep track of which material has been tested.
13. A system to prevent the inadvertent sale or use of nonconforming material or product.
14. A system to make sure that corrective action is taken whenever a quality problem is discovered and a system to try to prevent future quality problems from occurring.

15. A system to make sure that the right items get to the right place safely and on time.
16. A system to maintain and safeguard documents and records that relate to product quality.
17. A system that conducts periodic internal audits to verify the integrity of the quality system.
18. A system to ensure that employees have received the appropriate training for their jobs.
19. A system to ensure that servicing is carried out (if required by the sales contract).
20. A system to ensure that statistical techniques are used where appropriate and are properly applied.

**APPENDIX IV: KREJCIE & MORGAN TABLE FOR DETERMINING SAMPLE SIZE**

	S	N	S	N	S
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	100000	384

Note.— $N$  is population size.  $S$  is sample siz

