

**TOTAL QUALITY MANAGEMENT, INFORMATION AND
COMMUNICATION TECHNOLOGY AND, PERFORMANCE OF
NON-GOVERNMENTAL ORGANIZATIONS IN NAIROBI CITY
COUNTY**

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**A RESEARCH PROJECT SUBMITTED IN PARTIAL
FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF
THE DEGREE OF MASTERS OF BUSINESS ADMINISTRATION,
SCHOOL OF BUSINESS, UNIVERSITY OF NAIROBI**

2019

DECLARATION

This research project is my original work and has not been submitted for examination to any other university.

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This research project has been submitted for examination with my approval as the university supervisor.

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ACKNOWLEDGEMENTS

I would like to express my gratitude to all those who have contributed to the success of this research project in any way. My thanks go to the Almighty God who has given me the ability, time and energy to work on this research paper. I thank the management and staff of the University of Nairobi, Business School (Ambank and Lower Kabete) who provided an environment conducive for academic excellence. Thanks, in particular to my supervisor Dr. James T. Kariuki for his invaluable guidance and motivation. Thanks to my friend Charles Omondi Ogolla for the technical support in putting this research project together. Finally, I would especially like to thank my wife Wangari Muchira and my son Amari Chaling'a for their support.

God bless you.

DEDICATION

I dedicate this research project to my son Nestor Amari Chaling'a.

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ABBREVIATIONS AND ACRONYMS

BSC	–	Balanced Scorecard
EMMD	–	ESSLait Micro Moments Database
HIV/AIDS	–	Human Immunodeficiency Virus
HR	–	Human Resources
HRM	–	Human Resources Management
ICT	–	Information and Communication Technology
KRA	–	Kenya Revenue Authority
NCC	–	Nairobi City County
NGO	–	Non-Governmental Organization
NGOs	–	Non-Governmental Organizations
NWSC	–	Nairobi Water and Sewerage Company
OVC	–	Orphaned and Vulnerable Children
PBO	–	Public Benefits Organizations
PSI - K	–	Population Services of Kenya
SPSS	–	Statistical Package for Social Sciences
TAM	–	Technology Acceptance Model
TQM	–	Total Quality Management
TRA	–	Theory of Reasoned Action
UK	–	United Kingdom

ABSTRACT

The goal of this study was to determine the relationship between Total Quality Management Practices, Information and Communication Technology adoption and, performance of NGOs in Nairobi City County. To realize the objectives, a descriptive survey was used. Collection of primary data was done using a questionnaire. The population for this study comprised of 1,033 NGOs registered by NGO Coordination Board that were operating in Nairobi City County. A sample of 213 out of 1033 NGOs were sampled for responses. The questionnaire was administered electronically to all the sampled NGOs and 202 responded which resulted in a 95% response rate. The study findings revealed that NGOs in Nairobi City County had implemented TQM practices and adopted ICT in their operations to a great extent. The study determined that there was no statistically significant relationship between TQM practices, ICT adoption and performance of NGOs in Nairobi City County. It was found out that resistant to change by staff, selective TQM practices implementation and having staff with inadequate educational and experiential capacity to implement TQM practices were the main challenges faced in TQM implementation in NGOs in Nairobi City County. Additionally, inadequate resources, lack of training to staff when new systems are introduced, resistance to change from staff, and lack of staff with ICT knowhow were enlisted as the major challenges facing ICT adoption in the NGOs in Nairobi City County. The research recommends a countrywide study using other constructs to find out the relationship between TQM, ICT and performance of NGOs.

CHAPTER ONE

INTRODUCTION

1.1. Background of the Study

Organizations world over are working on strategies to enable them to thrive in the ever-changing business environment. Non-governmental organizations (NGOs) too are crafting strategies to enable them flourish in the constantly changing and turbulent NGO environment (Molloy & Schwenk, 1995). The ultimate recipients of services provided by NGOs and providers of funds are now more than ever concerned with ensuring that there is proper utilization of funds availed for various projects and interventions by evaluating value for money & time and ensuring that the interventions serve the purpose they were set up for. The concern by providers of finances and beneficiaries has been occasioned by among other factors; reduced funding within NGO sector and some unscrupulous management teams of NGOs who have mismanaged and misdirected funds. Both providers of funds and ultimate recipients are concerned with whether NGOs are rendering services as agreed in implementation plans, the means used by NGOs to ensure services are provided, cost incurred by NGOs to deliver services in comparison with other NGOs or other entities that offer similar services (Otieno, Mala, Mumbo, Aila & Odera, 2012). On the other hand, NGOs must comply with legal and statutory regimes that govern their operations in the country due to their nature as public benefits organizations (PBO) and the fact that their ideologies have to be in tandem with the governments' policies and guidelines (Batti, 2014).

NGOs receive funds as a matter of benevolence from their donors for specific purpose (McCoskey, 2009). Therefore, NGOs are responsible to a number of stakeholders who include: their boards of directors, donors, the general public, the government and ultimate recipients of interventions that they carry out (Edwards & Hulme, 1996). NGOs therefore must craft strategies to facilitate improved performance which then enables them to offer better services to their beneficiaries, provide precise and appropriate reports to the providers of funds and to government by ensuring various laws and regulations are

complied with. Appropriate execution of strategies leads to constant and increased flow of resources, improved working relations and trust with ultimate recipients. For government agencies, NGOs will eliminate penalties that come with noncompliance to laid down policies, laws and guidelines.

There are various tools, operational and management principles put in place to ensure that NGOs meet various stakeholders' needs. Implementation of Total Quality Management (TQM) as a management and quality improvement philosophy and adoption of the ever changing and growing Information and Communication Technology (ICT) are ways that organizations use to meet and exceed stakeholder's requirements. With the ever-increasing infusion of ICT in every area of business, it is imperative that for organizations to gain sustainable competitive advantage they have to strategically invest in ICT (Attewell & Rule, 1984).

This research was anchored on three theories; Deming's Theory of System of profound knowledge which advances that constant improvement of processes, growth in knowledge management and understanding of variations will eventually lead to improved performance in organizations. The second is the Technology Acceptance Model (TAM) which is a remodeled version of the theory of reasoned action (TRA) which specifically asserts how and why users accept and adapt information systems and the third theory is the Process Approach Model which is concerned with the transformation of organizational resources to produce goods and services.

1.1.1. Total Quality Management

Total Quality Management (TQM) is both a concept and a set of guiding principles underpinning an organization's continuous improvement. It encompasses key management strategies, optimization drives and structured functional capabilities (Besterfield, 1995). Wilkinson and Redman (1994) expounded on the meaning of TQM by defining each of the words that make up Total Quality Management, in which it was asserted that total demands involvement of all parties in and out of the organization in product and service delivery including suppliers and customers, quality means meeting customer requirements

as stated, and management means the full commitment of senior executives in an organization. Therefore, as described by Oakland (1989), TQM is a key technique of organizing and including entire organization, each division, all staff at all levels to meet customer requirements. TQM is a unified system, methodology, strategy and an intrinsic part of a high-level approach that works horizontally across divisions and departments, involving all staff and expanding to suppliers and customers (Ishikawa & Lu, 1985). From all these definitions is clear that there is no exclusive definition of TQM but common in all is that customer satisfaction is achieved by an organization that intentionally carries out continuous improvement.

TQM is an all-inclusive approach that is employed by organizations to improve efficiency in their processes and systems thereby meeting customer requirement and reducing costs. Several studies have been undertaken including but not limited to; Chapman and Al-Khawaldeh, (2002); Aspinwall and Al-khalifa, (2000); Al-Qudah, (2006) and Baidoun, (2004) all pointing to the fact that some dynamics that are necessary for effective adoption and implementation of TQM. The factors that have been pointed out include, devotion of senior management; empowerment and training of staff; customer focus; continuous improvement; quality measurement; policy and tactical communications; organizational culture that supports change; relationship with suppliers and planning of organizational structure. All these factors ensure that total quality is achieved, and products and services are delivered as per customers' specifications. The process of operationalizing TQM practices in organizations includes having the right measuring tools, encouraging creativity and innovation by staff to achieve improved service delivery (Pascal, 2002). All these are geared towards ensuring that organization improves its performance.

1.1.2. Information and Communication Technology

Information and Communication Technology (ICT) is a combination of all computer-related facets, including networking, hardware, software, internet and people working with these technologies (Christensson, 2010). Beckinsale and Ram (2006) assert that any application of scientific knowledge to capture, store, transmit and use data is ICT. Daft, Lengel and Trevino (1987) define ICT as hardware, software, telecommunications,

database management and other ICT technology used for data storage, processing and distribution.

As an important aspect, ICT aids in creativity and innovation, without which an organization will be lagging other organizations. ICT helps organizations to increase the ease of training new staff, aid in the process of developing marketing strategies, and develop processes for analysis and comparisons within an organization. In addition, ICT adoption leads to enhancement of productivity, improvement in profitability, enhanced work relations and collaboration, competitive gain and efficient utilization of resources at all organizational levels (Melville, Kraemer & Gurbaxani, 2004). Organizations embrace the use of ICT in their operations to bring about efficiency and what differentiates organizations is the infusion of innovation and creativity in one organization compared to others. Organizations that experience improvement in their operations attribute a great deal of this improvement to ICT (Ross, Hogaboam & Hannay, 1999). ICT has been acknowledged as an important component that enables improved organizational performance in various organizations (Bharati & Berg, 2003). Adoption of ICT improves communication, reduces wastage and ensures proper utilization of resources in an organization (Barton, 2009). ICT therefore provides an organization with the required infrastructure which helps an organization gain competitive advantage.

1.1.3. Organizational Performance

Noyé (2002) describes performance as entailing attainment of goals that an organization set out to achieve. Rolstadas (1998) believes that an organization's performance is a complex relationship with the following seven criteria: efficiency, reliability, productivity, effectiveness, quality of work, creativity and profitability. Performance is therefore closely linked to the achievement of the above-mentioned criteria, which can be considered as performance goals. Even though there is no commonly settled upon meaning of performance, an organization ought to have objectives and measure all outcomes based on the set objectives.

To measure Performance, organizations use various methods one of which is the Balanced Scorecard (BSC). BSC measures four aspects of an organization which are; Consumer viewpoint, internal business perspective, economic perspective and perspective on technology and training (Kaplan & Norton, 2001). Conversely, the concern of TQM is how an organization reduces waste, reworks and costs while ICT helps organization to have coordinated and effective ways of communication. Therefore, TQM is the means through which organizations plan to ensure efficiency and effectiveness in their operations, ICT is adopted to interconnect organization's systems and processes while BSC is a way in which the efficiency and effectiveness are measured.

For an NGO, customers are the beneficiaries of its interventions and therefore an NGO needs to know how it is meeting the beneficiaries needs. Performance in this case is measured by outcomes which are the results of NGO's program and/ or project and efficiency with which the NGOs use available resources to achieve planned results (Sharma, 2012). Internally NGOs need to know what they must excel at in order to achieve the reason for their existence and then look at ways of innovating and improving so as to experience improved performance. In addition, providers of funds need to get value for their money, requiring proper utilization and control of the available resources. An NGO's performance in this regard is measured by how efficiently it achieves the goals it has set (Sharma, 2012). Therefore, performance in NGOs covers areas of efficiency, effectiveness, relevance and financial viability. In response to changes in the competitive context, NGOs employ TQM practices and adopt ICT in order to improve their performance.

1.1.4. Non-Governmental Organizations in Nairobi City County

Non-Governmental Organizations (NGOs) are self-determining, independent, non-profit organizations targeted at improving the quality of life of the vulnerable (Vakil, 1997). NGOs in Kenya are registered and regulated by the Non-Governmental Organizations (NGO) Co-ordination Board. Specifically, NGO Co-ordination Board provides policy guidelines for NGOs so that NGOs comply to statutory regime and national priorities. NGO Co-ordination Board classifies NGOs into either local or international NGOs. Local NGOs have their mandate limited to Kenyan borders while international NGOs have their

mandate both within the Kenyan borders and beyond. Most NGOs operating in Kenya have their headquarters in Nairobi. These NGOs are involved in supporting interventions in several sectors including but not limited to gender, agriculture, orphaned and vulnerable children (OVC), education, population and reproductive health, environment, governance, energy, disability, health, HIV/AIDS, informal sector, micro finance, old age care, peace building, refugees, relief, , water, welfare and youth. One NGO may carry out one or more of the aforementioned interventions. NGOs offer their services for free with exception of a few that charge for their services and plough back funds for their operations.

For a long time, NGOs have been at the forefront in inventing and innovating interventions for providing solutions and meeting various needs in the society. In the recent past, NGOs have also been involved in ensuring they come up with sustainable development in their various sectors (Amutabi, 2006). All these interventions come with a myriad of challenges including but not limited to inadequate funding, competition from the private sector, increased reporting requirements from donor agencies and ever-changing government policies. Therefore, NGOs need to craft strategies to allow them to benefit and achieve sustainable competitive advantage, meet and exceed the needs of the varied stakeholders. TQM practices and ICT adoption provide an anchor in which the NGOs can base their management philosophy in order to improve their performance. In this context, the study sought to determine the relation between TQM practices, ICT adoption and NGO performance in Nairobi City County.

1.2. Research Problem

TQM being a quality management philosophy, emphasizes on individuals and work procedure to satisfy clients and improve organizational performance which entails proper coordination in all business units and work process (Maloba, 2014). TQM aims at achieving continuous improvement with a drive of meeting and exceeding customer's expectations. TQM seeks to attain set standards in all organizational facets to reduce and eliminate waste, rework, reduce costs of operations and increase efficiency in production and organizational performance. Implementation of TQM practices is gradual and evolutionary in nature and demands that the practices of TQM are employed in totality.

ICT comes to play as one of the contributors to organizational performance. Therefore, the link between investment in ICT and the performance of an organization is of concern to all business stakeholders and researchers.

Most NGOs receive funding that is less compared to their needs. There is a growing need for NGOs to holistically approach their interventions which leads to increased scope for most NGOs while funding levels have either remained the same or even reduced over time. In addition, there is increase in living costs in the country leading to increased staffing and other operational costs for NGOs. On the donors' side there is a great change in strategic direction by several donor agencies which has affected the funding and operations of NGOs in a great way. The government on the other hand has been changing rules and regulatory requirements for NGOs which sometimes has led to either delayed compliance or noncompliance. With all these challenges that NGOs face, there is still an expectation from donors for contracts to be followed to the letter and even some expecting cost share from NGOs. It is in view of the above concerns that this study was conducted to find out how TQM practices have been implemented and ICT adopted to ensure improved and sustained performance by NGOs in Nairobi City County (NCC).

There are challenges involved in TQM implementation in many organizations worldwide. Dahiya and Bhatia (2013) have highlighted some challenges faced in TQM implementation and they include; resistance to change emanating from autocratic style of leadership, inadequate and/ or lack of staff commitment, lack of quality culture, improper and unclear communication channels, viewing quality certification as some bureaucratic exercise and problems in identification of customer requirements. Development of conducive quality culture environment, involvement of each person in the organization, developing a sense of ownership, having a proper information exchange path and undertaking all activities in the organization with the customer in mind have been suggested as a way to address the above problems (Dahiya & Bhatia, 2013). Crowley and Ryan (2013), highlight small scale ad hoc implementation, inadequate knowledge, relatively slow pace of change, inadequate funding and changes in responsibilities and customs as challenges faced in adoption of ICT

in NGOs. Collaboration between NGOs and other sectors has been suggested as one of the ways to ensure ICT adoption succeeds (Crowley & Ryan, 2013).

Griffith (1999) found out that investment in ICT enhances productivity in firms, improved management capabilities and enabled organizations to gain competitive advantage. The study considered ICT alone devoid of TQM for organizational performance. Gayah (2012) studied the implication TQM implementation on Human Resources (HR) planning practices in an organization and the study concluded that proper HR structures must be used and aligned with the strategy to reap the benefits that accrue from TQM implementation. The study was limited since it only fixated on human resources aspect of a firm. Maloba (2014) focused on effect of TQM implementation in NGOs on service delivery as a case study noting importance of top-level management involvement in TQM implementation. Being a case study, its findings cannot be generalized because they are not representative of the population. Oriere (2011) carried out an investigation of TQM and the findings were that TQM and all underlying assumptions can be used to manage organizational strategy. The study mainly focused on TQM and organizational strategy without regard to other areas of an organization like culture and learning. Mwangi (2003) found out that organizations, are focusing their attention to education as a way to improve organizational performance. Gakuo (2011) studying impact of ICT on Nairobi Water and Sewerage Company (NWSC) observed an increase in return on investment, improved organizational performance and increase in revenue which he attributed to use of ICT in the firm. As a case study, the results are not representative of the population. Kinuthia (2012), studied the linking between ICT investment and NGOs' performance in Kenya and concluded that ICT was pertinent to any organization that wants to improve performance.

1.3. Research Objectives

The overall objective of the study was to find out the relationship between TQM practices, ICT adoption and performance of NGOs in Nairobi City County (NCC)

The study's specific objectives were:

- i. To ascertain how far TQM practices have been espoused by NGOs.
- ii. To determine how far ICT has been adopted by NGOs in their operations.

- iii. To find out the relationship between TQM, ICT and NGO performance.
- iv. To find out challenges NGOs face in implementing TQM practices and adopting ICT in their operations.

1.4.Value of the Study

Management of various NGOs are expected to use findings of the study as a basis upon which they will assess performance of their organizations while identified deficiencies and challenges will be addressed to improve organizational productivity. It is expected that this research will assist organizations identify unexploited opportunities in TQM and ICT and identify areas where their resources are wasted and consequently implement controls leading to cost saving. The results of the study are expected to help institutions and organizations in the design of approaches for implementation of TQM and fruitful adoption of ICT and the setting of criteria to improve organizational performance. Human resource managers and policymakers are expected to apply the study findings to develop realistic strategies that will successfully increase productivity. Finally, scholars can benefit from the study as it is expected to contribute to TQM and ICT's growing knowledge base and act as a research tool for ICT and quality studies. In this context, the study aims to address the existing empirical gap by conducting research on the connection between TQM, ICT and organizational performance.

CHAPTER TWO

LITERATURE REVIEW

2.1. The Theoretical Framework

Theoretical framework provides philosophical basis upon which this research was undertaken, forming the relationship between theoretical and practical features of this research. Theoretical framework obligated all decisions made in this study.

2.1.1. The System of Profound Knowledge

The system of Profound Knowledge provides a framework for thought processing and actioning for any leader who has a goal of creating a thriving organization. In this study, it was used to evaluate the relationship between the adoption of TQM practices and organizational performance. Constant seeking of new knowledge in an organization for continuous improvement, studying and understanding human behavior to gain knowledge for motivating, coordinating and managing people aimed at optimizing a system, only then can an organization experience the benefits of TQM (Deming, 2000). When management of an organization appropriately applies the principles and practices of this theory, an organization can reduce organizational costs through elimination or reduction of waste, rework, staff turnover and litigation, and at the same time improving quality, maintaining customer loyalty, maintaining a satisfied workforce with a view of attaining improved performance which ultimately leads to profitability (Deming, 2000).

The theory proposes that a leader must understand a system they are managing in order to gain insight on how to improve it for the purpose of improved organizational performance. To optimize a system, there must be coordination and cooperation among system parts which is brought about by proper leadership. ICT plays an important role in ensuring coherence in system functionality. This theory was therefore important in this study and helped find out how management in various NGOs have implemented TQM and how ICT plays a role in NGOs to improve performance.

2.1.2. Technology Acceptance Model

Technology Acceptance Model (TAM) is an expansion of the Fishbein and Ajzen (1975) reasoned action theory (TRA) adapted to model user acceptance of information systems (Davis, 1989). The theory provides an explanation of the rudiments of ICT acceptance that in general explains the behavior of ICT users across several end user computing technologies and populations that use those technologies with frugal and theoretical justification. Users of technology in an organization, must accept and use emerging technology for it to bring about effectiveness in organizational operations (Davis, 1989).

The theory was pertinent to the study since it submits that exterior variables circuitously affect individuals' attitude toward adoption of ICT by influencing perceived usefulness and perceived ease of use. The external variables that an individual is faced with in ICT adoption decisions include user attributes of the individual, social factors or those related to their tasks. The model was significant to the research since it looks at acceptance of technology adoption by users providing a basis of the value of accepting technology has on organizational performance.

2.1.3. The Process Approach Model

The process approach model focuses on how resources are converted to create goods or services in an organization (Thomas, Schermerhorn and Dienhart, 2004). This deals with the efficiency and effectiveness of an organization's internal systems and processes to optimize organizational performance. This looks at improved performance in an organization occasioned by relationship among all the staff which is built on honesty, trust and good will leading to seamless stream of info on both vertical and horizontal basis (Cameron, 1986). The model is relevant in the study since it looks at how processes in the organization are interlinked to bring about improved performance in organizations.

There are various tools that are used in organizations to operationalize performance one of which is balanced scorecard. Balance scorecard aims to measure how components of business strategy have been achieved (Kaplan & Norton, 2001). The performance areas

assessed primarily by balance scorecard are financial, customers, internal business processes and innovation including learning and growth. The use of balance scorecard helps an organization to measure the most important aspects of its operations to find out if it is performing as per set goals or not.

2.2. Performance of Non-Governmental Organizations

There are different aspects that affect the performance of NGOs due to the fact that NGOs are set up to achieve different goals. Musyula (2014), in a case study of Action Aid International examined aspects affecting performance of NGOs in Kenya. The study involved 49 participants drawn from staff, board of directors and beneficiaries. Data collection was done using a survey. The study found out that an effective board of directors that gives proper direction to management leads to improved performance in addition to a highly skilled management team and staff. The study also found out that if an NGO maintains a cordial relationship with the donor agencies then it is likely to improve its performance due to increased and sustained donor funding.

In Wangu (2015), 45 questionnaires were administered and achieved 82% response rate. The study established that there were several factors that determined performance of NGOs ranging from type of leadership, internal organization structure to pressure from stakeholders. Other factors identified as affecting performance in NGOs include established communication channels in the organization, level of accountability of the management to varied stakeholders within the organization, the legal framework in the country and ease at which change is accepted and implemented in the organization.

Kanaa (2010), studying issues affecting performance of NGOs in Kenya: a case of Marsabit district, collected data by use of questionnaires, interviews and review of publications. Data was collected from 72 respondents who were staff of 37 NGOs in Marsabit district. The study established that organizations that had project implementation staff who had undergone project management skills training, performed better in comparison with their counter parts. It was also identified that constant monitoring and assessment of projects

was required to ensure that projects stayed on track and achieved the results they were designed to achieve.

2.3.TQM implementation and Performance in Organizations

Execution of TQM enables practical procedures of managing people, processes and systems which in the end leads to improved organizational performance. TQM as a continuous improvement philosophy, follows the fact that there is conventional knowhow in an organization which provides a starting point for analysis, standardization and improvement to bring about evolutionary, incremental and continuous improvement to the existing processes (Aspinwall, 2000). All this is done to gain improved organizational performance and better service delivery to both internal and external customers. Customers are requested for feedback on what they need provided for them and the organizations endeavor to ensure customers' demands are met. TQM implementation entails involvement of all persons within an organization either as individuals, workgroups or teams and its bottom up approach brings in ownership and employee empowerment at all levels (Hyde, 1992). Through implementation of TQM, integration of available resources, departments and functions for the sole purpose of ensuring customer satisfaction is achieved through better and improved organizational performance. The silos in an organization are broken and each person in an organization focuses on meeting and surpassing the expectations of the customer.

Scholars and researchers have taken time to study the relationship between TQM and performance in organizations. Thapa (2011) investigated the impact of TQM in Nepal's education sector and the need for TQM to improve overall education quality in Nepal. The study used secondary data on the benefits of TQM from other studies and related the same with the education sector in Nepal. It was observed that TQM provides models, frameworks and programs for controlling academic reforms. The study also asserted that TQM practices makes everyone a manager of their own responsibilities in an institution that is implementing TQM regardless of their status or position. The findings align with the existing knowledge that TQM can be applied to any sector and that it creates ownership of

responsibilities at all levels in an organization. The research relied purely on secondary data and therefore assumptions that were considered during collection of primary data in the other studies were not put into consideration during this study.

Jaafreh and Abedalfattah (2013) studied how organizational performance is impacted by quality management practices in Jordan, with focus being on the banking sector. The study randomly selected six hundred out of the possible 14,036 employees in the banking industry and administered questionnaires which had parameters to measure what really affects organizational performance. The study found out that focusing on customer needs, employee relations, engagement of top management and strategic planning remain key quality management practices that affect in a great way organizational performance in banking sector in Jordan. These findings are in line with the existing knowledge and TQM practices and principles. The study mainly focused on employees, leaving out other stakeholders in the banking industry like suppliers, customers, shareholders, government agencies and other sectors of the economy.

Kyalo (2015), researched the adoption of TQM and service provision at Kenya Power. The study involved one hundred and seventy-five Kenya Power employees who responded to questionnaires and interview questions on TQM implementation at Kenya Power. The study concluded that the key to unlocking quality achievement in any company was top management participation in the implementation of TQM. In addition, the study found out that employee involvement was important and proposed that employees are to be trained to be effective in implementing TQM practices. The study supports the existing knowledge on TQM specifically on the importance of management involvement, training for employees and involvement of all staff in TQM implementation. It cannot be applied to the entire population since it is a case study. Also, the users of Kenya Power services were not considered in the study.

Muthama (2016) researched how TQM practices affect performance of mobile telecommunication companies in Kenya. The study involved twenty-seven heads of departments in the five telecommunication firms in Kenya at the time who responded to a

questionnaire on implementation of TQM in their various firms. TQM practices implementation in all the five telecommunication operators in Kenya: Airtel Networks Kenya Limited, Orange Telkom Kenya Limited (Orange), Finserve Africa Limited (Equitel), Safaricom Limited, and Sema Africa Limited were reviewed. The study concluded that implementation of TQM led to increase in the mobile telecommunication firms' profitability, increased sales, acquisition of new markets, customer retention, reduced wastages, improved efficiency in operations, improved service delivery to customers and improved employee welfare. The study supports existing knowledge that TQM practices lead to overall improvement in organizational performance. Only the management staff were interviewed leaving out other staff in the organizations who are involved in TQM implementation.

Mwaura (2017) conducted a research on TQM's effect on Kenya Revenue Authority (KRA)'s performance. Ten senior management staff at KRA were interviewed in the research. The study found out that TQM implementation had led to increased revenue collection by KRA, reduced turnaround time in responding to clients and that training of KRA staff had increased their ability to handle queries and issues raised by clients. The findings support existing knowledge that efficiency and effectiveness increases with implementation of TQM practices. Being a case study, its findings cannot be generalized to other organizations, only senior management staff were interviewed leaving out other staff that are involved in TQM implementation.

2.4. ICT Adoption and Performance in Organizations

Organizations are using ICT as a tool to optimize operational efficiency and enable exchange of information. By use of ICT, there has been ease in cross linking employees from different functional areas either horizontally or vertically in organizations. This has brought about high levels of efficiency and effectiveness in delivering value to organizations and their stakeholders (Hiltz, Johnson & Turoff, 1986). Employees have been linked by use of data base depositories, emails and teleconferencing facilities (Dewett & Jones, 2001). ICT has been utilized to aid in keeping institutional knowledge and

memory (Huber, 1990). Development in ICT has led to great strides in organizations being able to capture, store, communicate, codify and retrieve information for an organization.

Boundary spanning has greatly been increased and enabled by use of ICT in business operations. Emails and teleconferencing capabilities have enabled cross functional, cross geographical and time zone boundaries elimination. Staff too can work on documents away from work stations leading to non-requirement of staff to be physically present in offices for work to proceed (Tushman & Charles, 2012). Efficiency has improved greatly due to use of ICT, this includes but not limited to; lowered costs, ease of recording, control of access to information, ability to have large amounts of data stored, retrieved, combined, reconfigured and recorded quickly and accurately. Innovation is encouraged and realized by organizations through use of ICT, where new technologies are infused within businesses and its interactions with the society leading to novel discoveries and knowledge.

Effect of ICT on performance in different organizations has been extensively researched by various scholars. Falk and Biagi (2015) used globally comparable data for 14 countries in Europe to research the effect of various ICT technologies and e-commerce activities on jobs and productivity. Data was obtained from ESSLait Micro Moments Database (EMMD) containing connected and micro-aggregated information about corporations from national statistical offices. Differences in types of ICT capacities were found to be significantly linked to labor productivity. There is also variation between the effect on productivity of ICT and the ICT type. It was also found that effect of ICT varies considerably between manufacturing and service industries. The findings agree with existing knowledge in that there is a difference between ICT use in either manufacturing or service industries. The study did not use primary data and therefore did not consider the assumptions that gave rise to the secondary data.

Odhiambo (2013) examined ICT use in high schools in the district of Rachuonyo South, Homa-Bay, Kenya. 320 students, 24 teachers and 8 heads of high school were sampled in the research, and a questionnaire administered to them. The study revealed that ICT was an incredibly powerful tool in teaching and learning process. Students who are constantly

exposed to ICT skills changed their views on both education and ICT and ICT strengthened teachers' efficiency and effectiveness in their work. The findings support existing knowledge on how ICT leads to efficiency and effectiveness in service delivery. The study only focused on a part of the education sector and did not target all stakeholders in the high school education sector like the parents, education officers and examination bodies involved in secondary education.

In his research on the effect of information technology on organizational efficiency, Kimani (2015) used an online questionnaire for Population Services Kenya (PSK) to collect data from 311 PSK employees of the potential 438. The study determined that ICT has major bearing on an organization's performance in all areas. Specifically, the research found out that adoption and effective utilization of ICT led to increased donor funding, effective collaboration between PSK and other partners and the organization has been able to accurately accomplish, track and assess strategic objectives. In general, the use of ICT is claimed to contribute to an organization's performance improvement. The finding is therefore in agreement with existing knowledge on contribution of ICT to performance in organizations. Some stakeholders like the government, PSK's projects participants, suppliers, donors and partners that are affected by PSK's services were not included in the study. Also, since it was a case study, its findings cannot be generalized.

2.5.Challenges Faced in TQM Implementation

Various scholars and industry players have taken time to study what might be the causes of failures in implementing TQM practices in various organizations. Several issues have been raised as the causes of the failures. Mosadeghrad (2014) divided TQM implementation challenges into five categories: tactical barriers, systemic barriers, impediments to human resources, situational barriers, and administrative barriers.

Whalen and Rahim (1994), Tamimi, Jabnoun and Sebastianelli (2003), expound these further and provided the specifics contained under each category. Under Strategic barriers, unattainable expectations, poor management, lack of leadership skills, inadequate support from top management, poor planning, conflicting objectives, lack of clear directions and

vision, lack of prioritization, fear due to previous failures and inconsistencies in objectives were identified as challenges faced in TQM implementation. For structural impediments inappropriate structure of an organization, absence of adaptability in the organization, inadequate resources and inadequate time were identified as barriers. Furthermore, under human resources hurdles, absence of staff interest, absence of staff involvement and commitment, institutional inertia, weak human resource management (HRM) practices, absence of delegation, over strained staff, dearth of learning and education, lack of staff motivation and recognition of employee efforts have been identified as contributing greatly to challenges in TQM implementation. Contextually, incorrect organizational culture, lack of support groups, weak and inefficient collaboration, poor coordination, lack of employee and management trust, cultural problems, hindered creativity, obstacles to mindset and workplace diversity contribute significantly to the failure of TQM implementation. Last but not least, lack of direction, insufficient and incomplete management processes, lack of comprehension of customers, lack of proper vendors, bureaucratic processes, lack of evaluation and self-assessment, negligence and ineffective correction plans are the operational hurdles that hinder implementation of TQM. As seen, most of the failures are attributed to leadership and choices made by the leaders and management in an organization, (Cătălin, Bogdan &Dimitrie, 2015). It therefore becomes imperative that organizations must be aware of these barriers and work to ensure the barriers do not bring about poor unanticipated results in TQM implementation.

2.6.Challenges Faced in Information Communication Technology Adoption

Al-fleit, Almalki and Zafar (2017) reveal a number of challenges that arise in any organization during the adoption of ICT. The challenges can also be categorized into challenges related to leadership, human challenges, technical challenges and other challenges. Lederer and Sethi (1991) indicate that top management in most organizations want to be persuaded to implement any ICT strategy developed. Aaltonen and Ikävalko (2002) expounds the management challenge to include, little or no support from top management for ICT strategy adoption, weak management roles in ICT adoption, lack or inadequate support from top management in creation and implementing systems and poor coordination and

communication to ensure responsibilities are well articulated. Wilson (1989) in his study of 500 companies in the United Kingdom (UK) found that not employing professional staff, inadequate resources for user training, the rapidly changing needs of the ICT users and inabilities by systems to fulfil the user's expectations as the main human challenges faced in implementation of ICT.

Eseh, Ossai and Adegoke (2014) looking at the technical angle of ICT implementation found out that inability to transform and reconfigure business process to work well within the ICT system was top at the technical challenges faced by organizations in ICT implementation. Following closely were lack of requirements for information system and difficulties in upgrading the previous systems to new versions and having staff adapt accordingly. Aaltonen and Ikävalko (2002) adds to the list of other challenges facing ICT implementation the following: difficulties in aligning the ICT strategy and an organization's business strategy, adopting ICT strategy behind schedule, inability to measure benefits from ICT, expenses to be incurred in changing from one system to another, inadequate budgetary allocation equipment and applications to be used in ICT adoption. It is quite clear that adoption of ICT has a myriad of challenges in any organization yet its importance to any business cannot be over emphasized.

2.7. Conceptual Framework

In conceptual framework organizational performance was looked at as a dependent variable with TQM Practices and ICT independent variables where program aspects of cost, project impact, timeliness, quality, proper utilization of resources and stakeholder engagement in addition to Financial sustainability measuring organization performance as presented in Figure 2.1

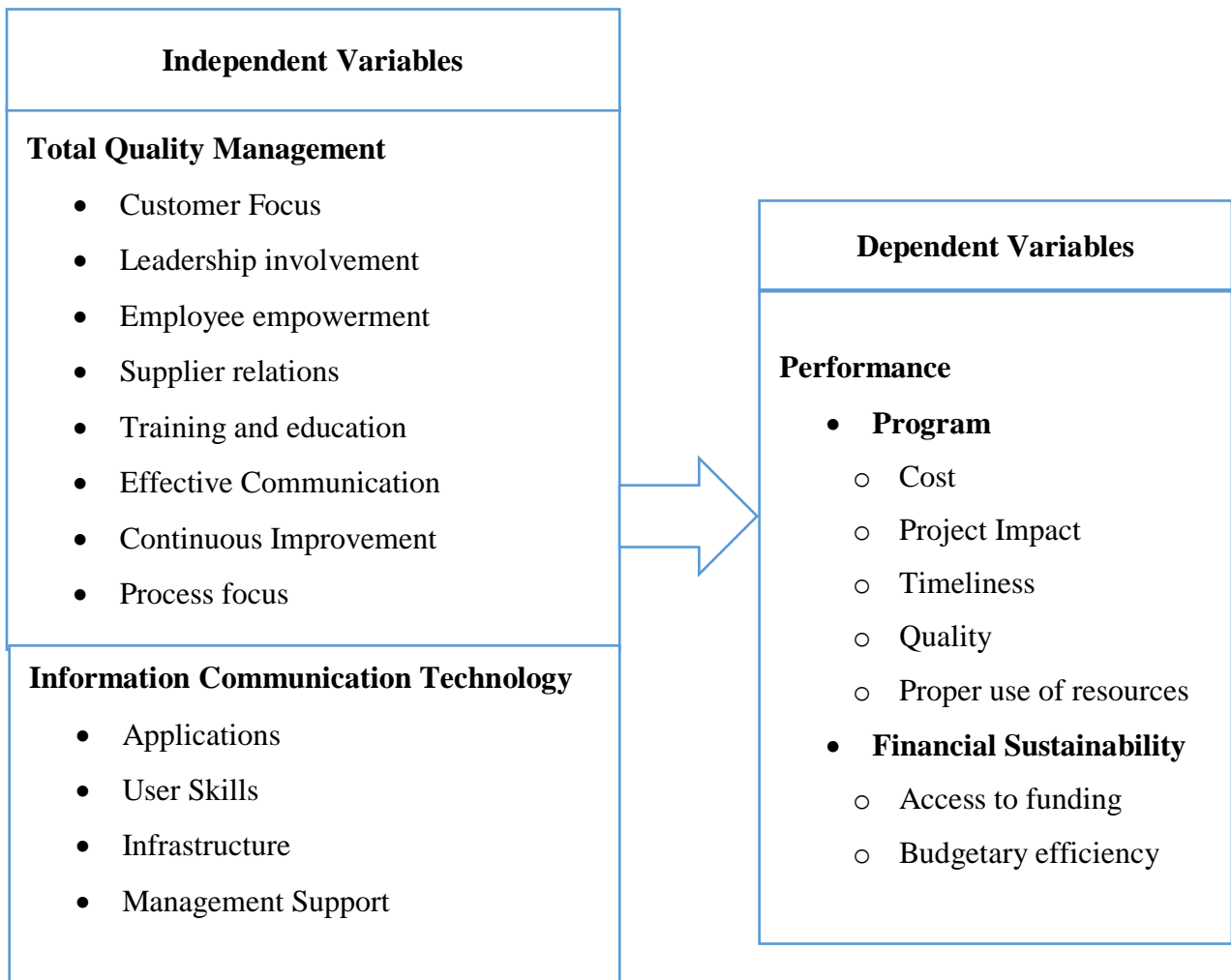


Figure 2.1: Conceptual Framework

Source: Author

CHAPTER THREE

RESEARCH METHODOLOGY

3.1. Research design

The research utilized cross-sectional research design so as to enable comparison of different population groups at a single point in time. The research also utilized both quantitative and qualitative methodologies. In quantitative methodology, closed questions by use of Likert scale were used while in qualitative methodology, open ended questions were used.

3.2. Population

There were 1,033 NGOs registered by the NGO Co-ordination Board and operating in NCC as of August 31, 2019 and they all formed research population.

3.3. Sample Size

Fisher (1998)'s formula was used to determine the sample size.

$$\text{Sample size, } n = N * \frac{\frac{Z^2 * p * (1 - p)}{e^2}}{[N - 1 + \frac{Z^2 * p * (1 - p)}{e^2}]}$$

where N is the population size, Z is critical value of the normal distribution at the required confidence level, p is the sample proportion while e is the margin of error. For this study, N = 1,033, z = 1.64, p = 0.5 assuming perfect heterogeneity while e = 0.05. Therefore, 213 NGOs was determined as the correct sample size out of a population of 1,033 NGOs in NCC. The number of NGOs per sector were selected by getting percentage proportion of each sector in comparison with the total population and multiplying by the sample size so as to get equitable representation from each sector as presented in Table 3.1. Stratified random sampling has been used to pick NGOs from each sector before questionnaires were administered with the respondents in the selected NGOs.

Table 3.1: Distribution of Sample Size by Sector

NGO Sector	Number of NGOs	Percentage of total population	No. Sampled
Agriculture	35	3.39%	7
Children	127	12.29%	26
Disability	37	3.58%	8
Education	166	16.07%	34
Environment	46	4.45%	10
Gender	58	5.61%	12
Governance	40	3.87%	8
Health	113	10.94%	23
HIV/AIDS	43	4.16%	10
Info Sector	16	1.55%	3
Micro finance	18	1.75%	4
Old Age Care	6	0.58%	1
Peace Building	31	3.00%	6
Population and Reproductive Health	16	1.55%	3
Refugees	17	1.65%	4
Relief	36	3.49%	7
Water and Sanitation	11	1.06%	2
Welfare	137	13.26%	28
Youth	80	7.75%	17
Total	1,033	100.00	213

3.4. Data collection

The study collected primary data from technical, managerial and ICT employees of the sampled NGOs using a questionnaire which was administered through google forms. One questionnaire was sent to each NGO. The NGOs were reached through email and telephone calls.

3.5. Validity and Reliability of Data Collection Tools

Pre testing of the research questionnaire was carried out before it was administered to respondents so as to test how valid and reliable the research questionnaire was. The process was carried out to identify likely problems and difficulties in using the tool and correcting them. Lucidity of the instrument and appropriateness of language for the final questionnaire

were also tested. Relevance of the research objectives was assessed during this process in addition to determining whether the respondents understood the subject matter. The length of time that was required to respond to the questionnaire was assessed. The structure, wording and question sequence in the questionnaire were tested. Validity and reliability testing of data collection tool also provided data for probability sample selection.

3.5.1. Validity of Data Collection Tools

Validity measures whether the results from data analysis represents the phenomenon being studied. Content validity test was carried out to determine whether the tool was accurate and useful for the study. Construct validity test was also conducted. There was categorization of the questionnaire into several parts so that each objective was well assessed. This also helped to ensure that the questionnaire was closely as possible related to the study framework.

3.5.2. Reliability of Data Collection Tools

The degree of consistent results obtained by a research instrument is called reliability (Mugenda & Mugenda, 2003). The questionnaire, which was the data collection tool, was tested on 3% of the sample. Reliability tests were performed on randomly selected respondents. The collected data was coded in the Social Sciences Statistical Package (SPSS) and Cronbach's Alpha value determined to assess the questionnaire's internal consistency. Cronbach's alpha coefficient gave a value of 0.918 for ICT adoption, 0.984 for performance and 0.955 for TQM practices implementation, Chin (1998) recommends a 0.70 threshold for Cronbach's Alpha. Being that the scores for TQM practices, ICT adoption and performance were higher than 0.70, the data collection tool passed the reliability test.

3.6. Data Analysis

Data preparation included, transforming all responses on the extent of ICT adoption and TQM practices implementation to ordinal values to enable regression analysis. In transforming the responses to ordinal values, strongly disagree was 1, disagree was 2, neutral was 3, agree was 4 while strongly agree was 5. Then averages for the various TQM

practices responses were calculated, the averages for ICT and for performance were calculated too. For objectives 1 and 2, Likert scale with scores ranging from 1-5, were used to determine the extent to which either TQM practices have been implemented or ICT adopted. Based on the Likert scale, a mean of ≥ 4 meant that TQM and/ or ICT is being implemented to a large extent, $= 3$ meant that TQM and/ or ICT is being implemented but not fully while < 3 this meant that TQM and/ or ICT is being implemented to a very low extent or not at all.

Regression analysis was used to determine objective 3 which is the effect of TQM and ICT on performance,

$$y = b_0 + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5 + b_6x_6 + b_7x_7 + b_8x_8 + b_9x_9 + b_{10}x_{10} + b_{11}x_{11} + b_{12}x_{12}$$

Where y = Performance

x_1 = Customer Focus

x_2 = Leadership involvement

x_3 = Employee empowerment

x_4 = Supplier relations

x_5 = Training and education

x_6 = Effective Communication

x_7 = Continuous Improvement

x_8 = Process focus

x_9 = ICT Applications

x_{10} = ICT User Skills

x_{11} = ICT Infrastructure

x_{12} = Management support

$b_1, b_2, b_3, b_4, b_5, b_6, b_7, b_8, b_9, b_{10}, b_{11}$ and b_{12} are regression coefficients that show relation between the predictor variables of TQM practices and ICT adoption and the dependent variable performance.

b_0 = Constant or the value of performance when there is no both TQM practices and ICT adoption. The composite index for performance was calculated by getting averages for the scores from all the responses of the respondents on performance of their organizations

For objective 4, content analysis based on themes and patterns was be used for analysis.

CHAPTER FOUR

DATA ANALYSIS, FINDINGS AND DISCUSSION

4.1. Introduction

In this chapter, research findings are represented and analyzed based on the research methodology established. This chapter analyzes and discusses both independent and dependent variables in the study, hypotheses and literature presented in the previous chapters are also discussed here.

4.2. Response Rate

The questionnaire was responded to by 202 respondents, representing a response rate of 95%. This response rate was considered significant and representative as it is consistent with the stipulation of Mugenda and Mugenda (2003) that a response rate of 50 per cent is suitable for analysis and reporting; a response rate of 60 per cent is good and a response rate of 70 per cent is excellent.

4.3. Demographic characteristics of respondents

Analysis of the demographic characteristics of the 202 respondents is as shown in Table 4.1. Respondents in the age group 31-40 years were 44.6% implying that NGOs have a relatively young staff working with them. Male respondents were higher for gender category at 54.5% this implies that mainly the men responded to the questionnaire. Those with 5-10 years of experience were the highest in years of experience at 41.1% meaning the staff have worked for the organizations for substantial number of years. Those in management at 45.0% showing that a number of organizations only allow management staff to respond to external request.

Table 4.1: Demographic Characteristics of Respondents

Variables	Categories	Frequency	Percent (%)
Gender	Female	92	45.5
	Male	110	54.5
Age Bracket	20 years and below	2	1.0
	21-30 years	60	29.7
	31-40 years	90	44.6
	41-50 years	45	22.3
	Above 50 years	5	2.5
Years of Experience	Above 20 years	7	3.5
	16-20 years	18	8.9
	11-15 years	28	13.9
	5-10 years	83	41.1
	Less than 5 years	66	32.7
Designation	ICT Staff	35	17.3
	Management staff	91	45.0
	Technical and/ or programmatic staff	76	37.6

From table 4.2, there were higher responses from education sector at 19.3%, welfare at 14.9%, children at 13.4% and health at 12.9% just in line with the sample size selection.

Table 4.2: Distribution of respondents by sectors

Sector	Frequency	Percent
Agriculture	6	3.0
Children	27	13.4
Disability	6	3.0
Education	39	19.3
Environment	6	3.0
Gender	4	2.0
Governance	4	2.0
Health	26	12.9
HIV/AIDS	9	4.5
Infor sector	2	1.0
Micro finance	4	2.0
Old Age	1	0.5
Peace building	5	2.5
Population and reproductive health	3	1.5
Refugees	7	3.5
Relief	5	2.5
Water and Sanitation	2	1.0
Welfare	30	14.9
Youth	16	7.9
Total	202	100.0

4.4. Reliability of the data

A reliability test was run on all 16 constructs of TQM practices, 17 constructs of ICT adoption and 23 constructs of performance. The test gave a Cronbach's Alpha value of 0.843, 0.918 and 0.984 for TQM practices, ICT adoption and performance constructs respectively as shown on table 4.3. It was therefore confirmed that the data was reliable since the Cronbach's Alpha for all the constructs was above 0.7

Table 4.3: Data Reliability Statistics

Reliability Statistics			
	TQM Practices	ICT Adoption	Performance
Cronbach's Alpha	0.843	0.918	0.984
Cronbach's Alpha Based on Standardized Items	0.841	0.918	0.984
No. of Items	16	17	23

4.5. Extent of TQM practices implementation in NGOs in NCC

From analysis of objective one, NGOs in NCC have adopted TQM in their operations. Eighty-one NGOs implemented TQM in their operations to a large extent, 97 NGOs implemented TQM practices in their operations to a medium extent while 24 of the sampled NGOs implemented TQM practices to a very low extent.

Table 4.4: Extent of TQM Practices Implementation by Sector

NGO Sector	TQM practice mean
Agriculture	4.05
Children	3.65
Disability	3.45
Education	3.60
Environment	3.82
Gender	3.88
Governance	4.48
Health	3.92
HIV/AIDS	4.23
Infor sector	3.75
Micro finance	2.95
Old Age Care	4.31
Peace building	3.01
Population and reproductive health	3.40
Refugees	3.96
Relief	4.04
Water and Sanitation	3.59
Welfare	3.72
Youth	3.87

From table 4.4, it is clear that all NGOs that responded have implemented TQM practices in their operations. NGOs from agriculture, environment, gender, governance, health, HIV/AIDS, info sector, refugees, relief, water and sanitation and youth sectors implemented TQM to a large extent. NGOs from children, disability, education, microfinance, peacebuilding, reproductive health and welfare implemented TQM practices but not to a large extent.

Table 4.5: Extent of TQM Practices Implementation by NGOs in NCC

TQM Practice	Mean	Std. Deviation
The needs of participants are assessed by the organization before workplans are developed	4.05	0.994
The organization always puts participants feedback into consideration	3.85	0.981
The management provides resources required for all projects	3.77	1.017
Top management communicates quality standards of the organization regularly	3.86	1.019
Management considers every staff's contribution on issues in the organization as important.	3.68	1.046
Employees are consulted before decisions are made by management	3.28	1.098
The organization has suppliers that it has worked with for a long period of time	3.87	1.006
The organization regularly communicates to suppliers detailed requirements before supply of goods and services	4.02	0.957
All staff are trained at least annually in their area of expertise	3.41	1.112
There are inhouse courses developed for staff to undertake at their own time and pace	3.39	1.246
There are clear channels of communication in the organization.	4.08	0.945
Communication policy has been developed to guide ways of communication in the organization	3.79	1.044
Staff are awarded annually for their innovations which benefit the organization	3.34	1.252
Quality improvement teams have been created in our organization	3.64	1.186
There are standard operating procedures that are used in our organization	4.11	1.003
Standard operating procedures in our organization are updated regularly	3.89	1.026
Mean	3.75	

From table 4.5, the overall mean score for the Total Quality Management stood at 3.75 signaling that most of the NGOs were applying TQM practices in their operations. The mean of the different constructs ranged from 3.28 to 4.11 showing that the sampled NGOs from the various sectors were implementing TQM practices at different level ranging from average extent of implementation to large extent of implementation.

4.6. Extent of ICT adoption by NGOs in NCC

From analysis of objective 2, it is clear that NGOs in NCC have adopted ICT in their operations. Eighty-one NGOs adopted ICT in their operations to a large extent, 94 NGOs adopted ICT in the operations to a medium extent while 27 NGOs adopted ICT in their operations to a very low extent.

Table 4.6: Extent of ICT Adoption by Sector

Sector	Mean
Agriculture	3.68
Children	3.74
Disability	2.84
Education	3.71
Environment	3.59
Gender	3.82
Governance	4.41
Health	3.86
HIV/AIDS	4.13
Infor sector	3.35
Micro finance	3.25
Old Age Care	3.71
Peace building	3.28
Population and reproductive health	2.98
Refugees	3.75
Relief	4.36
Water and Sanitation	3.76
Welfare	3.67
Youth	3.97

From table 4.6, NGOs in agriculture, gender, governance, health, HIV/AIDS, microfinance, refugees, relief, water and sanitation and youth sectors, adopted ICT to a great extent in the operations while NGOs in children, disability, education, environment, info sector, peace building, population and reproductive health and welfare sectors, implemented ICT in their operations but to a small extent.

Table 4.7: Extent of ICT Adoption by NGOs in NCC

ICT Adoption	Mean	Std. Deviation
All human resources (HR) processes in the organization are computerized	3.46	1.107
All financial management processes in the organization are computerized	3.97	1.014
All procurement processes in our organization are computerized	3.46	1.061
All programmatic management processes in the organization are computerized.	3.57	1.011
All quality assurance practices in the organization are computerized	3.4	1.134
There is support to all staff in the organization when they have an issue with the system	4	0.977
All applications are updated regularly	3.79	1.096
There is always a training for all relevant staff when a new system is installed	3.95	1.013
All staff are trained on basic use of computer system in our organization	3.6	1.138
All staff use the system in their work	3.73	1.102
There is always steady internet in the organization	3.87	1.009
There are guidelines and procedures in our organization of how to use ICT	3.77	1.073
The guidelines and procedures are updated regularly to keep up with changes in the organization	3.75	1.008
Finance is always availed by management to support ICT initiatives	3.55	1.017
The management invests in ensuring that the organization always has a functioning ICT infrastructure.	3.9	0.943
There are data management systems in the organization.	3.91	0.955
Data management systems have controlled access in the organization	3.85	1.006
Mean	3.74	

From table 4.7, the overall mean score for ICT adoption stood at 3.74 signaling that most of the NGOs had adopted ICT in their operations to a large extent. The mean of the different constructs ranged from 3.40 to 4.00 showing that the sampled sectors had adopted ICT at different levels.

4.7. Relationship between TQM, ICT and performance of NGOs in NCC

To determine objective three which is the relationship between TQM practices, ICT adoption and organizational performance of NGOs in NCC, regression analysis was used.

Table 4.8: Model Summary

Model Summary									
Model 1	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
	.239 ^a	0.057	-0.003	2.27015807	0.057	0.950	12	189	0.498
a. Predictors: (Constant), Customer focus, leadership involvement, Employee empowerment, Supplier relations, Training and education, Effective Communication, Continuous Improvement, Process focus, ICT applications, ICT user skills, ICT infrastructure, management support									

Regression analysis was carried out to assess the significance of the relationship between TQM practices, ICT adoption and organizational performance. From Table 4.8, coefficient of determination is 0.057; thus, adoption of TQM practices and ICT explains about 5.7% of the variance in organizational performance. The F statistic is 0.498 which is higher than 0.05 meaning that there is no statistically significant relationship between TQM practices, ICT adoption and organizational performance in NGOs in NCC.

4.8.Challenges faced in TQM practices implementation and ICT adoption

From the themes and patterns, most of the respondents indicated the following as major challenges affecting implementation of TQM practices, staff being resistant to change, quality improvement being done to some of the processes and not all processes in the organizations and organizations not hiring staff with adequate capacity (both education and experience) to implement TQM practices. NGOs therefore need to ensure staff are made aware of importance of improvements being done in the organization so that staff can offer unreserved support, TQM practices should be applied in all organizational processes and staff with requisite capacity should be hired so that they can help the organization implement quality practices.

As pertains ICT Adoption, inadequate resources, lack of training to staff when new systems are introduced, resistance to change from staff, and lack of staff with ICT knowhow were enlisted as the major challenges facing ICT adoption in the NGOs. The management teams of NGOs should therefore prioritize ICT as they seek resources for implementation of various projects. The NGOs should also focus on training staff whenever new systems are introduced, communicate benefits of any changes to staff vis a vis the legacy systems and invest in having staff with ICT knowhow or even outsource the function for better performance of the organization.

4.9.Discussion of Findings

Based on the findings, it is clear that NGOs in NCC have implemented TQM practices in their operations to a large extent. This agrees with literature in which it was found out that organizations implement TQM practices in their operations to improve organizational performance (Hyde, 1992). Also, NGOs in NCC have adopted ICT in their operations to a large extent. From literature it was found out that organizations regardless of size or industry adopt ICT in their operations to increase efficiency, and effectiveness with the aim of improving organizational performance (Hiltz, Johnson & Turoff, 1986).

The results of the research did not establish a statistically significant relationship between practices of TQM, ICT and organizational performance. This is not in line with existing literature Aspinwall (2000) where organizations that adopt TQM practices experience improved organizational performance. Achieng and Jagero (2014) assert that support from management for adoption of ICT leads to improved organizational performance.

It was established from the research that resistant to change, selective application of TQM practices and staff with inadequate capacity to carry out TQM practices implementation as the main challenges facing TQM practices implementation. This agrees with existing literature as asserted by (Mosadeghrad, 2014). Further the research found out inadequate resources, inadequate to unavailability of training, struggling with change in addition to lack of staff with ICT knowhow as challenges facing ICT adoption in NGOs in NCC. The finding agrees with Esuh, Ossai and Adegoke (2014)'s study on challenges facing ICT adoption.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1. Introduction

This chapter principally provides the study's summary, conclusion and recommendations. The results were based on objectives of the research which were to determine the extent of TQM practices implementation and ICT adoption by NGOs in NCC, the relationship between implementation of TQM practices, adoption of ICT and performance of NGOs in NCC and the challenges that NGOs face in NCC in implementation of TQM and adoption of ICT.

5.2. Summary

The objective of the study was to identify the relationship between the execution of TQM practices, ICT adoption and NGO performance in NCC. The study found out that 40% of the NGOs that responded implemented TQM to a large extent, 48% implemented TQM to a medium extent while 12% implemented TQM to a very low extent. It was also established from the study that 40% of the respondents had adopted ICT to a large extent, 47% to a medium extent and 13% to a low extent. The study found that there was no statistically significant relationship between ICT adoption, TQM practices and performance of NGOs in Nairobi City County.

Key challenges that NGOs face in NCC in TQM implementation are staff being resistant to change, quality improvement being done to some of the processes and not all processes in the organizations and organizations not hiring staff with adequate capacity (both education and experience) to implement required quality practices. Inadequate resources, lack of training to staff when new systems are introduced, resistance to change from staff, and lack of staff with ICT knowhow were enlisted as the major challenges facing ICT adoption in the NGOs.

5.3. Conclusion

The study concluded that a large number of NGOs in NCC implemented TQM practices and also adopted ICT in their operations to a large extent. On determining the relationship between TQM practices and ICT adoption, the study determined that relationship was not statistically significant. This could have been due to small sample size; the respondents may not have been conversant with the subject matter.

5.4. Recommendations

From the findings of the study, it is recommended that researchers find out why the relationship between TQM, ICT and performance was statistically insignificant in this study. Also, different questions for TQM, ICT and performance could be used in another study.

5.5. Areas for Further Research

This study intended to establish the relationship between TQM practices, ICT adoption and performance of NGOs in NCC in an attempt to bridge the knowledge gap that existed. The research focused specifically on NGOs in NCC, there is need to repeat the study using other organizations in different parts of the country to find out how TQM implementation and ICT adoption differs within the country. It will also be important to find out why the relationship in this study was statistically insignificant and carry out another research using totally different questions.

REFERENCES

- Aaltonen, P., & Ikävalko, H. (2002). Implementing strategies successfully: Integrated manufacturing systems, Vol.13 No.6, pp.415-18
- Al-Khalifa, K. N., & Aspinwall, E. M. (2000). *Using the competing values framework to identify the ideal profile for TQM: A UK perspective*. International manufacturing technology and management, 2(1-7), 1024-1040.
- Almalki, M., Al-fleit, S., & Zafar, A. (2017). Challenges in implementation of information system strategies in Saudi business environment: A case study of a bank. International journal of computer trends and technology (IJCTT) V43(1):56-64, January 2017. ISSN:2231-2803. www.ijcttjournal.org. Published by seventh sense research group.
- Al-Qudah, M. A. (2006). *Impact of adopting total quality strategy (TQS) in improving competitiveness*. An analytical study for Jordanian pharmaceutical industry companies, unpublished Ph.D dissertation, Amman Arab University for Graduate Studies
- Amutabi, Maurice. (2006). *The NGO factor in Africa: The case of arrested development in Kenya*. The case of arrested development in Kenya. 1-238. 10.4324/9780203960707.
- Attewell, P., & Rule, J. (1984). *Computing and organizations: What we know and what we don't know*
- Baidoun, S. (2004). *The implementation of TQM philosophy in Palestinian organization*. A proposed non-prescriptive generic framework”, The TQM Magazine, 16(3), 174-85.
- Barton, B. (2009). *Technology in UK education – history and the future*.
- Batti, R.C. (2014). *Challenges facing local NGOs in resource mobilization*. Humanities and social sciences. Vol. 2, No. 3, pp. 57-64. doi: 10.11648/j.hss.20140203.12
- Beckinsale, M., I Ram, M. (2006). *Delivering ICT to ethnic minority businesses*. An action-research approach. Environment and planning C: Government & policy, 24(6), 847-867.
- Besterfield, D.H. (1995). Total quality management, New Jersey, Prentice Hall Inc.
- Bharati, P. and Berg, D. (2003). *Managing information technology for service quality*. A study from the other Side”, IT and People, Vol. 16, No. 2, pp. 183-202.

- Cameron, K. S. (1986). A study of organizational effectiveness and its predictors, *Management Science* 32, 87–112
- Cătălin, S., Bogdan, B., & Dimitrie, G. (2014). The existing barriers in implementing total quality management. Retrieved from <http://steconomiceuoradea.ro/anale/volume/2014/n1/138.pdf>
- Chapman, R., & Alkhaldeh, K. (2002). *Quality management world-wide*. (TQM and labour productivity in Jordanian industrial companies). *The TQM Magazine*, 14, 248-262.
- Christensson, P. (2010). IT definition. Retrieved 2018, Aug 3, from <https://techterms.com>
- Crowley, J., & Ryan, M. (2013). Building a better international NGO: Greater than the sum of the parts?
- Dahiya, M., & Bhatia, D. (2013). Challenges in implementing total quality management (TQM). *International journal of engineering research & technology (IJERT)*. ISSN: 2278-0181, Vol. 2 Issue 3, March - 2013
- Daft, R. L., Lengel, R. H., & Trevino, L. K. (1987). Message equivocality, media selection, and manager performance: Implications for information systems. *MIS Quarterly*, 11, 355–366.
- Davis, F. (1989) Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS quarterly*, 13, 319-340. <https://doi.org/10.2307/249008>
- Deming, W. E. 1. (2000). *The new economics: For industry, government, education* (2nd ed.). Cambridge, Mass. MIT Press.
- Dewett, T., & Jones, G. R. (2001). The role of information technology in the organization: a review, model, and assessment. *Journal of management*, 27(3), 313-346.
- Edwards, M., & Hulme, D. (1996). *Too close for comfort*. The impact of official aid on nongovernmental organizations
- Falk, M. & Biagi, F. (2015). Empirical studies on the impacts of ICT usage in Europe. Institute for prospective technological studies digital economy working paper 2015/14. JRC98693
- Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention, and behavior: An introduction to theory and research*. Reading, MA: Addison-Wesley

- Huber, G. (1990). A theory of the effects of advanced information technologies on organizational design, intelligence, and decision making: Academy of management review. 10.5465/AMR.1990.4308227
- Hyde, A. (1992). The proverbs of total quality management. Recharting the path to quality improvement in the public sector. Public productivity and management review, 16(1), 25-37.
- Hiltz, S. R., Johnson, K., & Turoff, M. (1986). Experiments in group decision making: Communication process and outcome in face-to-face versus computerized conferences. *Human communication research*, 13(2), 225-252.
- Ishikawa, K., & Lu, D. (1985). What is total quality control? Englewood Cliffs, NJ, Prentice-Hall.
- Jabnoun, N., Sebastianelli, R. & Tamimi, A. H. (2003), "Measuring perceived service quality at UAE commercial banks", International journal of quality & reliability management, Vol. 20 No. 4, pp. 458-472.
- Jaafreh, A. & Abedalfattah, A. (2013). The effect of quality management practices on organizational performance in Jordan an empirical study. International journal of financial research. Vol. 4, No. 1.
- Kanaa, M. (2010). Factors affecting the performance of non-governmental organizations' projects in Kenya: A case of Marsabit District; Kenyatta University.
- Kaplan, R. S. & Norton, D. P. (2001). Transforming the balanced scorecard from performance measurement to strategic management: Part I. Accounting Horizons 15(1): 87-104.
- Kimani, A.K. (2013). Impact of information technology on organizational performance: Case of population services Kenya, University of Nairobi
- Kyalo, M.K. (2015). Total quality management implementation and service delivery at Kenya power: University of Nairobi.
- Lebas, M.J. (1995) Performance measurement and performance management. International journal of production economics, 41, 23-35. [http://dx.doi.org/10.1016/0925-5273\(95\)00081-X](http://dx.doi.org/10.1016/0925-5273(95)00081-X)
- Lederer, A. L., & Sethi, V. (1991). Critical dimensions of strategic information systems planning. decision sciences, 22(1), 104-104.

- Maloba, B. E. (2014). *Total quality management and service delivery at world vision Kenya*. University of Nairobi
- McCoskey, S. (2009). *The evolving role of data in decision making*. The journal of humanitarian assistance field experience and current research on humanitarian action and policy, A report from the economist intelligence unit.
- Melville, N. Kraemer, K. & Gurbaxani, V. (2004). *Information technology and organizational performance*. An integrative model of IT business value," *MIS Quarterly*, (28: 2)
- Molloy, S., & Schwenk, C.R. (1995). *The effects of information technology on strategic decision making*
- Mosadeghrad A. M. (2014). Factors influencing healthcare service quality. *International journal of health policy and management*, 3(2), 77–89. doi:10.15171/ijhpm.2014.65
- Mugenda, O. M., & Mugenda, A. G. (2003). *Research methods: Qualitative and quantitative approaches*. Nairobi: Acts Press. Mugenda, O. M., & Mugenda, A. G. (1999). *Research methods: Quantitative and qualitative approaches*. Nairobi: Acts Press.
- Musyula, P. A. (2014). *Factors affecting the performance of non-governmental organizations in Kenya: A case of action aid international*
- Muthama, K. A. (2016). *Total quality management and performance of mobile telecommunication firms in Kenya*. University of Nairobi
- Mwaura, N. N. (2017). *Effect of total quality management on performance of Kenya revenue authority*. University of Nairobi
- Noyé, D. (2002). *Manager les performances*. Les Basic d'INSEP consulting, <https://books.google.co.ke/books?id=JHdcwBjVLwMC>
- Oakland, J.S. (1989). *Total quality management*; Heinemann
- Odhiambo, S.O. (2013). *Use of information communication technology in teaching and learning processes in secondary schools in Rachuonyo south district, Homa-Bay county, Kenya*, University of Nairobi
- Otieno, B., Mala, S., Mumbo, H., Aila, F., & Odera, O. (2012). *Factors affecting mobilization of Kenyan resources for health and development*: *International Journal Social Science and Education* Volume 3: Issue 1

- Eshu, O. I., Adegoke, O. (2014). The challenges and difficulties of information system development: A case study of PERHEBAT
- Pascal, D. (2002). A plain language guide to the world's most powerful production systems: Lean production simplified, Productivity press.
- Ross, J., Hogaboam, G. A., & Hannay, L. (1999). Predictors of teachers' confidence to implement computer-based instruction: Journal of educational computing research, 21 (1), pp.75-97.
- Rolstadas, A. (1998). *Enterprise performance measurement*, International journal of operations & production management, Vol. 18 No. 9/10, pp. 989-999. <https://doi.org/10.1108/01443579810225577>
- Sharma, P. (2012). Performance measurement in NGOs, The management accountant
- Thapa, T. (2011). Total quality management in education: Academic voices: A multidisciplinary journal. 10.3126/av.v1i0.5314
- Thomas, T., Schermerhorn, J. R., & Dienhart, J. W. (2004). Strategic leadership of ethical behavior in business, Academy of management executive, 2004, Vol. 18, No. 2
- Tushman, M. L., & Charles, A. O. (2012). Winning through innovation: A practical guide to leading organizational change and renewal. Boston, MA: Harvard business school press.
- Vakil, A. C. (1997). *Confronting the classification problem*. Toward a taxonomy of NGO. World development journal, 25, 12.
- Wangu, K.D. (2015). Balanced score card and performance of non-governmental organizations in Kenya: University of Nairobi
- Whalen, M.J. & Rahim, A. (1994). Common barriers to implementation and development of a TQM program
- Wilkinson, A., Redman, T., & Snape, E. (1994). *What is happening in quality management?* Findings from an IM Survey, The TQM Magazine, Vol. 6 No.1, pp.55-58.
- Wilson, B.J. (1989). Desensitizing children's emotional reactions to the mass media. Communication research, 16(6), 723-745. <https://doi.org/10.1177/009365089016006001>

APPENDICES

Appendix 1: Research Questionnaire

Instructions

Please be assured that information provided in this interview guide is purely for academic purpose and therefore would be treated with utmost **CONFIDENTIALITY**.

Thank you.

SECTION A: GENERAL INFORMATION

1. Please select your gender

Male Female

2. In which age bracket do you belong to?

20 years and below 21-30 years 31-40 years 41-50 years

Above 50 years

3. How many years have you worked in the NGO sector in Kenya?

Less than 5 years 5-10 years 11-15 years 16-20 years Above 20 years

4. Please state your designation in the organization you work for

Management staff Technical/Programmatic staff ICT staff

5. Please choose the sector in which your NGO is involved in

Agriculture Children Disability Education Environment

Gender Governance Health HIV/AIDS Infor sector Micro finance

Old age care Peace building Population and reproductive health

Refugees Relief Water and Sanitation Welfare

Youth

Other (Please Specify)

SECTION B: TQM PRACTICES IMPLEMENTATION

6. Kindly indicate the extent to which you agree to the following statements in regard to total quality management in your organization.

TQM Practices	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
The needs of participants are assessed by the organization before workplans are developed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The organization always puts participants feedback into consideration	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The management provides resources required for all projects	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Top management communicates quality standards of the organization regularly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Management considers every staff's contribution on issues in the organization as important.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Employees are consulted before decisions are made by management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The organization has suppliers that it has worked with for a long period of time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The organization regularly communicates to suppliers detailed requirements before supply of goods and services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All staff are trained at least annually in their area of expertise	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There are inhouse courses developed for staff to undertake at their own time and pace	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There are clear channels of communication in the organization.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Communication policy has been developed to guide ways of communication in the organization	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Staff are awarded annually for their innovations which benefit the organization	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Quality improvement teams have been created in our organization	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

There are standard operating procedures that are used in our organization	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Standard operating procedures in our organization are updated regularly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please indicate other quality management practices in your organization that are not included above

7. Please state challenges that your organization has encountered in implementing the TQM practices stated in 6 above if any

SECTION C: ICT ADOPTION

8. Kindly indicate the extent to which you agree to each of the following statements in regard to Information, Communication and Technology in your organization.

ICT Adoption practices	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
All human resources (HR) processes in the organization are computerized	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All financial management processes in the organization are computerized	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All procurement processes in our organization are computerized	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All programmatic management processes in the organization are computerized.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All quality assurance practices in the organization are computerized	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

There is support to all staff in the organization when they have an issue with the system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All applications are updated regularly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There is always a training for all relevant staff when a new system is installed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All staff are trained on basic use of computer system in our organization	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All staff use the system in their work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There is always steady internet in the organization	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There are guidelines and procedures in our organization of how to use ICT	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The guidelines and procedures are updated regularly to keep up with changes in the organization	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Finance is always availed by management to support ICT initiatives	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The management invests in ensuring that the organization always has a functioning ICT infrastructure.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There are data management systems in the organization.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Data management systems have controlled access in the organization	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please indicate other ICT adoption practices in your organization that are not included above

9. Please state challenges that your organization has encountered in implementing the ICT practices stated in 8 above if any

SECTION D: PERFORMANCE

10. In scale of 1 – 10 with 1 being the poorest and 10 being the best, please rate the NGO that provided you with the services.

	1	2	3	4	5	6	7	8	9	10
The organization has increased the number of projects it offers over time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Number of participants in each of our projects has been increasing over time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All our projects are implemented within the set timelines	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The cost of running our projects has been reducing with time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The quality of our projects has been increasing over time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There has been an increase in stakeholder involvement in our projects	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The projects implemented by the organization always meet an identified need in the society.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The projects implemented by the organization encourage sustainability among the participants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The projects implemented are progressive in terms of value addition to participants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Expenditure in the organization is incurred as per the workplans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Expenditure deviation is always within the acceptable variance of ($\pm 10\%$)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There are regular financial audits carried out for the organization.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The organization is ready to incur expenses on a need arise basis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The organization has flexibility to adjust budgets to meet changes in programming.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The organization maintains proper financial records	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The organization has proper control mechanism over purchases.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The organization has proper control mechanisms over all payment processes.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The organization has proper control mechanisms over all bank accounts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The organization has control of all payroll management aspects	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All fixed assets in the organization are properly managed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All programs are evaluated to determine their quality	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Financial statements are sent to providers of funds on regular basis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Management reviews financial statements regularly in the organization.										

11. Any other information about Quality and ICT in your organization Can be indicated below:

Thank you for your participation.

Appendix 2: List of Sampled NGOs Operating in Nairobi City County

1. A Global Healthcare Public Foundation
2. Access Agriculture
3. Act Change Transform
4. Action Africa Help Kenya
5. Action Aid International Kenya
6. Action Green for Trade and Sustainable Development (AGSTD)
7. Action in Focus
8. Action Network for The Disabled
9. Advocates for Social Change-Kenya
10. Africa Educational Trust
11. Africa Health Information Channel (AHIC)
12. Africa Inland Child and Community Agency for Development (AICCAAD)
13. Africa Platform for Social Protection
14. Africa Women's Entrepreneurship Programme Kenya Chapter
15. African Alliance of Rangeland Management and Development
16. African Family Health
17. African Institute for Development Policy (AFIDEP)
18. African Mental Health Research and Training
19. African Network for the Prevention and Protection Against Child Abuse and Neglect - Kenya Chapter
20. African Network for the Prevention and Protection Against Child Abuse and Neglect - Regional Office
21. African Prisons Project Kenya
22. African Wildlife Foundation
23. African Women's Development and Communication Network
24. Afya Research Africa
25. Agency for Disability and Development in Africa
26. Aids Law Project
27. Akili Dada
28. American Friends Service Committee
29. American Refugee Committee
30. Amici Del Mondo World Friends - Onlus
31. Amnesty International Kenya
32. Amref Health Africa In Kenya
33. Arigatou International Kenya
34. Arthur Kitonga Foundation
35. Avsi Foundation
36. Balm Africa Concern
37. Basic Needs Basic Rights Kenya
38. Bathopele Hope Foundation
39. Bible Translation and Literacy (E.A)
40. Blind and Low Vision Network - Kenya
41. Busara Centre For Behavioral Economics
42. Call Africa

43. Camp Counsellors Africa
44. Cancer Research & Communications Organization
45. Canopy Life International
46. Cara Projects
47. Care International
48. Centre for the Study of Adolescence
49. Cesvi - Cooperazione Sviluppo
50. Charitable Aid for Peace and Development Organization
51. Children's Fortress Africa
52. Childs Life International
53. Chosen Children of Promise
54. Christian Mission Aid
55. Christian Sports Contact Kenya
56. Christoffel Blindenmission E.V
57. Civil Society Urban Development Platform
58. Coalition on Violence Against Women - Kenya
59. Community Education and Empowerment Centre
60. Community Hands Against Poverty
61. Compassion International Inc.
62. Concern Worldwide
63. Cuts- Centre For International Trade Economics and Environment
64. Danish Refugee Council
65. Diakonia Sweden
66. Digital Opportunity Trust Kenya
67. Don Bosco Development Outreach Network
68. Dorcas Aid International - Kenya
69. Eco-Growth Development Organization
70. Eddahs Hope Cancer Foundation
71. Educate! Kenya
72. Energy, Environment and Development Network for Africa
73. Environmental Compliance Institute (Eci)
74. Farm Africa
75. Federation of Women Lawyers-Kenya
76. Feed the Children Kenya
77. First Bridge Foundation
78. Forum for International Co-Operation
79. Forum Syd Swedish Ngo Centre For Development Cooperation
80. Fountain of Grace
81. Friends of Children (Amici Del Bambini - Ai.Bi. Kenya)
82. Gentiana Development Network
83. German Foundation for World Population
84. Global Communications Institute-Gci
85. Global Communities
86. Grapes Yard Organization
87. Haki Mashinani Programme
88. Hand in Hand Eastern Africa

89. Handicap International
90. Happy Kidney Foundation
91. Healing Fountain Centre
92. Health Ngo's Network
93. Heart Alive Foundation
94. Helpage International
95. Helping Hand for Relief and Development
96. Hifadhi Africa Organization
97. Honken Global Volunteering for Change
98. Hope Worldwide Kenya
99. Human Quality Assessment Services
100. Humanity Beyond Border
101. I Serve Africa
102. I'm Worth Defending
103. Ima World Health
104. Inspiration Centre
105. Institute for Transportation & Development Policy
106. International Centre For Development and Research (CIDR)
107. International Centre For Research on Women -East Africa Regional Office
108. International Republican Institute
109. International Rescue Committee
110. International Water Association (IWA) Africa
111. Intersos Kenya
112. Intrahealth International
113. Islamic Relief-Kenya
114. Junior Achievement Kenya
115. Karura Community Centre
116. Kenya Adult Learners Association
117. Kenya Christian Industrial Training Institute (KCITI)
118. Kenya Human Rights Commission
119. Kenya Ngo Alliance Against Malaria
120. Kenya Pediatric Research Consortium
121. Kenya Poverty Elimination Networks
122. Kenya Slum Youth's Development Organization
123. Kenya Water for Health Organization
124. Kenyan Network of Cancer Organization
125. Kikwetu Foundation
126. Leadership & Sustainability Africa
127. Local Capacities for Peace International
128. Lvct Health
129. Maahad Daawah Organization
130. Maji Mazuri Centre International
131. Marafiki Community International
132. Masters Men Africa
133. Mazingira Institute

134. Mediciens Sans Frontieres - France
135. Men Engage Kenya Network (MENKEN)
136. Mennonite Central Committee Kenya
137. Mercy Corps
138. Mothers 2 Mothers Kenya
139. Moving Mountains Kenya
140. National Christian Youth Network
141. National Empowerment Network of People Living with HIV/AIDS in Kenya
142. National Organization of Peer Educators
143. Network of African Science Academies (NASAC)
144. Nico D Amore (Nest of Love) Organization
145. Noble Actions International Organization
146. Northern Aid
147. Norwegian Church Aid
148. Nurture Smart Youth Program Kenya
149. One Childs Village-Kenya
150. One Drop for All Organization
151. One Girl Can Kenya
152. One Touch One Life Organization
153. Onekid Oneworld
154. Pais Project Kenya
155. Pamoja Development Projects
156. Pamoja Road Safety Initiative
157. Pamoja Women Development Programme
158. Pan African Mosquito Control Association
159. Parenting in Africa Network
160. Partners in Literacy Ministries
161. Peace Brigades International-Kenya Project
162. Peaceful Heart and Mind Changing Organization
163. Physicians for Human Rights Inc
164. Plan International
165. Poor Bright And Orphans Kenya
166. Population Services International Kenya
167. Practical Action
168. Precious Blood Children's Family
169. Precious Sisters Charity Trust
170. Programme For Helping the Elderly and Vulnerable Individuals In Kenya
171. Refuge Point International
172. Regional Counselling and Psychosocial Organization
173. Reproductive Health Services
174. Results Japan Kenya Office
175. Risk Accredited Management Systems-Africa
176. Roman Peace - Africa (Pax Romana - Africa)
177. Rural Hope Foundation
178. Safe Drive Africa Foundation

179. Safeguard Orphans and Widows Organization
180. Samaritans Purse International Relief
181. Save Somali Women and Children
182. Save The Children International (Kenya)
183. Shalom Centre For Conflict Resolution and Reconciliation
184. Shining Hope for Communities
185. Smart Drivers' Organization
186. Solution Seeds Foundation
187. South-South Network Engagement-Africa
188. Sports Aid Africa
189. Start with One Kenya
190. Support for Addictions Prevention and Treatment in Africa
191. Technoserve Kenya
192. Terre Solidali Kenya
193. The Action Foundation
194. The African Youth with Disabilities Network
195. The Companionship of Works Organization
196. The Gender Platform
197. The Global Development Incubator Inc
198. The Life Ministry
199. Tumaini Fund for Economic Development International
200. Undugu Society of Kenya
201. Universal Periodic Review-Information Africa
202. Upendo Empowerment Programme
203. Urban Research and Development Centre For Africa
204. Users and Survivors of Psychiatry in Kenya
205. Uvumbuzi Africa
206. Vision Africa Give A Child A Future
207. Water and Sanitation for Poverty Reduction
208. William Rogers Foundation
209. Women United for Social Economic and Total Empowerment
210. World Wide Fund for Nature Kenya (WWF-Kenya)
211. Youth Against Disasters
212. Youth Alive! Kenya
213. Zury Organization Kenya

