THE INTERNATIONAL JOURNAL OF BUSINESS & MANAGEMENT

Total Quality Management Practices and Performance of Rural Electricity Distribution Projects in Kenya

Stellah M. Kathongo
Ph.D. Student, Kenyatta University, Kenya

Abstract:
Electricity is very important for socio-economic development in a country and to enhance development in the rural areas there is the need to ensure consumer focus is done which may lead to quality services in electricity distribution projects. Total Quality Management (TQM) is a management approach for organization which has customer focus and aim at quality products/services in most projects. This study has an objective of determining the influence of total quality management (TQM) practices on the performance of electricity distribution projects in rural areas in Kenya which can increase electricity access, increase capacity power transfers, reduce system losses and still increase enhanced connectivity. The TQM has many principles and literature review used in this study is based on four practices: Knowledge of the process approach, continuous improvement, Employee empowerment, top management empowerment and the methodology used is in-depth review of the literature on total quality management practices on performances. In Kenya, Rural Electrification Authority(REA) completes the projects and hands it over to Kenya power and Lightening Company(KPLC) for operations and maintenance based on the service level of agreement (SLA). The study will collect data from the employees of REA and KPLC employees in the Kitui County and use questionnaire to collect data which was analyzed through descriptive and inferential analysis. The study will use factor analysis model .From previous research the finding shows that the variables had a positive significant and strong relationship between TQM and the performance of organizations

Keywords: *Total quality management practices, rural, electricity distribution projects, rural electrification authority*

1. Introduction

Following vision 2030 blueprint, modern management of projects is encouraging production of quality services which leads to satisfaction of customer's expectation. For a project to be successful it should be completed within time, scope, on budget and of good quality. Rural electrification can increase electricity access to most of people in the country and can be done through use of total quality management practices, mobilization of resources, effective monitoring and evaluation of the power distribution projects and still oversight role over the REA and KPLC. Total quality management (TQM) is a management approach used by project managers to provide quality services to the customers in the rural areas beneficiaries and quality services can be achieved by ensuring that projects are completed with the budget, the scope, within the schedule and customer's satisfaction is achieved. African Development Bank (ADB) outlays that in Africa countries are facing a lot of power challenges which may include inadequate generation capacity, limited electrification especially in the rural areas, low quality and unrealizable services which are very costly, system losses and there is a gap between power supply in the rural and urban areas. According to the World Bank, 2013, Electricity is the backbone of socio-economic development of all the countries in the world and it is associated with provision of quality life and high living standards and according to IEA, 2009, most of the world's population is not having an access to electricity and a high percentage of 85% of the people are from the rural areas in the developing countries.

World Bank, (2011) urges that most parts of sub Sahara Africa have no electricity connection of national grid which gives statistical data of 46% and 6 % in urban areas and rural areas respectively. Still emphasized on continuous and fundamental structure and regulatory reforms in the energy sector after the middle of 1990's following the enactment of electricity power Act, 1997 and later in the year 2006 the same was emphasized in section 66 of Energy Act

Kenya national bureau of standards (KNBS, 2010), states that the Kenyan population in urban areas is 40% and half of the total population will be in urban areas in the year 2020 and the rest will be in rural and Kenya aspiring to be develop by the year 2030 and still improve the living standard of its citizens. The demand for electricity has continued to increase to grow as the population increase and following the policy of Kenyan government (GoK,2012) that electricity is the driver of economic growth and poverty alleviation, it has set targets of proving access to electricity to all households by year 2030. To achieve this goal, rural electrification authority should ensure that its projects management to use total quality management practices to ensure they are providing quality services in the rural areas to improve their living standards. Kenya is aiming at 105 growth of gross domestic product (GDP) by the year 2030 and still providing power connection to the 40% of the rural population of by the year 2020 (Ro K, 2012). KPLC is owned by the government and it has function of owning and operating both the transmission and distribution networks in Kenya and still it has the

responsible of purchasing bulk electricity and it supplies the customers in the country. KPLC operates also the majority of the off-grid diesel power plants behalf of the Rural Electrification Programme. KPLC has a responsible of generating schedule and dispatch, frequency control, voltage control, outage management and system security. According to master plan, 2013, Generation dispatch and control of the transmission network is done through the national control centre (NCC) and distribution networks are controlled through the four regional control centres (RCCs). Most rural areas are facing a lot of problems of demand of electricity due to high demand of services which require electricity (GOK, 2010). According to (KIPPRA, 2012), There is an increasing demand for electricity which is from 5035 Gwh in the year 2003/04 to as high as 8561 Gwh in the year 2013/14 due to change of technologies in the country. This makes it necessary for a country to align it policies and the strategies to ensure efficient supply of the electricity to curb the increasing demand (KIPPRA, 2012). Kenya National Bureau 0f standards (KNBS, 2011) states that the country is using 68% of traditional biomass, 22 % of fossil fuels, 9% of hydro power and the other sources 1% each. It still states that modern access of electricity in the rural areas is very low. According to sustainable energy for All (SE4AII), Household electricity access is about 32% of the total population with 51% of urban and 5% of rural households connected to the grid6.The number of electricity consumers have increased from 735,144 in 2004/05 to 2,330,962 by June 2013.The Kenyans government is implementing strategies to ensure that electricity is more accessible to the rural population because the gap is large because 7% of the population in the rural has electricity while in urban areas is 58% IEA,2013.

Kenya vision 2030 report, identifies that energy and electricity are the key elements of the country's economic growth and transformation and Kenya Energy Policy, 2012 states that energy Sector has structural reforms which have an objective of commercial competition in commercial activities which requires electricity in order to attract more investors in the rural areas to ensure regional balance in the country. The Energy Act, 2006 established Energy Regulatory Commission (ERC) as a sector regulatory agency which has responsibility for economic and technical regulation of electric power, renewable energy and petroleum sub-sectors. In Kenya provision for electricity is on the hands of the government and so it owns companies which provide and distribution of electricity and so rural electrification authority is focusing on ways to ensure that they have developed frameworks for initiating photovoltaic solar panels in rural households to open up opportunities for foreign investors. Development of rural electrification became a priority in the year of 1973 when the Kenyan government developed rural electrification programme which an aim of subsiding the cost of electricity supply in the rural area. According to ministry of energy (M o E, 2010), Kenya Power and Lighting Company (KPLC) is projecting 150,000 connections annually. This has been created by high demand for services which require electricity due to improved technology. This still has created some challenges faced in the process of implementing the projects which led to poor quality services to community people. (Mo E,2010). The challenges facing Rural Electrification programs in Kenya are poor quality services, high cost of installation and maintenance, low per capita power consumption, low supply capacity and still very low electricity access in the rural areas According to, Ofori, 2014, in Kenya, sources of electricity are: hydro 3,025 Gwh (51.2%), thermal oil 1,819 Gwh (30.8%), geothermal 1,046 Gwh (17.7%), generation 6 Gwh (0.09%), wind 0.3 Gwh (0.01%) and imports 11 Gwh (0.2%) and the National electrification policy was created to deal with the interests of rural people through rural electrification authority and by the year 2003, only 4% of connectivity had been achieved. REA had an objective of providing quality, affordable electricity and accessible electricity to the rural areas. REA had good response to limited access of electricity in rural areas by adopting the rural electrification programs which have the aim of increasing the speed and efficiency of running the projects in Kenya. In July 2007, Rural Electrification Authority (REA) was given mandate of implementing rural electrification programmes.REA has an objective of providing access to electricity to all households and public facilities' in the rural areas by the year 2030. In Kenya, rural electrification programmes (REPs) are ranked and prioritized according to how the locations will receive the electricity (Energy Act, 2012). REA had strategic plan towards implementation of electrification projects and once it completes the projects it hands over to KPLC for operations and maintenance.REA has a plan which three phases where by phase I from 2008- 2010 was to connect all public facilities, connect one million households and still increasing connectivity from 12% to 22%.Phase two was from 2013 – 2022 had plan of increasing connectivity to 65% and the last phase three which was to start from the year 2022 to 2030 which aimed to increase connectivity to 100% according to vision 2030.

Due to improved technology ,rural demand for electricity had increased by 37.7% and the access of electricity had grown by6% in the year 2010 (Economic Survey,2011, KNBS) .Ministry of Energy's rural electrification master plan, 2013 gives its intuitions to electrify all public facilities by 2012 and 40% of rural households by 2030. REA has an aim of electrifying all the primary schools in the country by 2015 and the government had supported by funding the project with 12.6 billion in 2014/15 financial year and more ever, REA has an aim of extending connections to most of the households in the rural areas by the year 2017 in the line with vision 2030 blueprint of the government for the development of vision 2030.

According to Washington, 2015, most people of Kenya will benefits from access to electricity and the existing ones will get quality electricity services because World Bank had approved a new project and provided 457.5 million for Kenya modernization projects. Kenya Vision 2030 identified challenges facing rural electrification which may hinder achievement of vision 2030 which aims at all citizens to have electricity by 2030 and so this study aims at addressing the managerial challenges which may hinder the achievement of vision 2030.

1.1. Statement of Problems

Electricity is very important for the growth of gross domestic product and still facilitates economic growth of a country (Deutshe Bank 2013). Kenya as a developing country is facing a lot of problems of supply of electricity because of inadequate electricity generation capacity and an unreliable power supply which has been perennial problems in Kenya for over a decade (IEA, 2010).

Kenya has a high population of over 40 million and 83% has poor electricity supply and the rural areas which are connected they experience a lot of shortages due to weather changes (NEPK, 2012). According to the study of (KIPPRA,2012) many households in rural areas of Kenya are using kerosene for lighting which is represented by 52% and around 60% of the population of the rural use biomass and more research statistics show that in the rural areas there is slow growth of electricity in Kenya world bank, 2013.

According to the World Bank, 2012 statistics it clear that REA connect 50000 rural households per year leaving behind 30,000 house hold. For the country to meet vision 2030, electricity in every household, energy sector demands 325MW in the year 2012, 2150 MW in the year 2022 and 4155MW in the year 2030 ERC, 2012. The Republic of Kenya (R o K) report states that there is a slow growth of electricity in the rural areas which is making economic growth to be very slow and it makes achievement of vision 2030 to be very hard. Ministry of Energy, Draft National Energy and Petroleum Policy, October 2014, showed that that peak electricity demand was projected to grow to 3,400MW by the year 2015 which was not be achieved many challenges which included managerial , financial and in effective monitoring and evaluation.

According to Rural Electrification Authority (REA, 2012), The strategic plan phase I which is from 2008- 2010 aimed at connecting all public facilities , connect one million households and still increasing connectivity from 12% to 22%. This has not happened in the rural areas in many counties and Kitui county integrated plan 2013- 2017 shows that there low electricity connection in the county where only 74 trading centre or having electricity and it gives half of the trading centre. This is a contrast to REA strategic plan and Kenya vision 2030. According to ERC, 2012 statistics show that for REA to achieve its set objectives according to strategic plan, there is need of national power demand of 325 MW, in 2012, 2150 MW in 2022 and lastly increase to 4155 MW in 2030.

Rural electrification project implementation in the rural areas in Kenya is been faced by many challenges where most of them includes managerial issues which include; slow procurement procedures, lack of community participation, ineffective communication among the stakeholders, lack of customer satisfaction, unavailability of materials and equipment, lack of knowledge of health and safety consciousness, low level of skilled personnel, unrealistic deadlines , poor controlling techniques ,lack of teamwork, poor coordination and long procedures of electricity connection (Ofori, 2012). To solve most of these challenges facing the electricity distribution projects in rural areas in Kenya, there is need to adopts TQM practices which can solve the problems ensuring quality services and customer satisfaction (Joseph.O, 2015).

According to the report of Kenya distribution Master plan vol.1 Aprial, 2013,in order to improve the efficiency and effectiveness of the network planning process, it is essential that improvements are made in the quality and accessibility of network and metering information available to the planning department and during data collection, it was observed that that network planning data was not readily available and they concluded that it was because of lack of consistent primary substation and feeder information which should be an issue of to be addressed to improve the planning process and this study aims at addressing it. Secondly, Distribution planning is recommended to be done at the local level within each region because knowledge of the local conditions, customers, and the existing network are all vital to distribution planning engineers and more ever this similar approach should be there throughout the KPLC county offices which can lead to applying national standards and planning criteria the report concluded that Currently there is a wide variance in terms of training, tools, experience, and methodology of distribution planning across the regions . Thirdly, the report shows that distribution network in Kenya are supplied over extremely long, radial 33 kV and 11 kV feeders, whichhas no alternative sources of supply and this long and undersized feeder leads to high losses of power. The report recommends the distribution infrastructure to be sized for both delivered power and power losses.

Kenyan government and donors are using a lot of efforts to reduce corruption and provide a lot of finances to support most of its activities including rural electrification projects and still there is a lot of unreliability of electricity in most of the places in rural areas in Kenya. Most research has not considered the managerial perspective challenges and so this study therefore will determine the influence of the total quality management (TQM) practices on the performance of electricity distribution projects in rural areas in Kenya.

1.2. General Objectives

To establish the influence of total quality management practices on performance of electricity distribution projects in rural areas in Kenya.

1.2.1. Specific Objectives

1. To determine the influence of knowledge of process approaches on performance of electricity distribution projects in rural areas in Kenya.
2. To assess the influence continuous improvement on performance of electricity distribution projects in rural areas in Kenya
3. To determine the influence of employee empowerment on performance of electricity distribution projects in rural areas in Kenya
4. To determine the influence of top management leadership on performance of electricity distribution projects in rural areas in Kenya.

.

2. Theoretical Literature Review

2.1. Deming Theory

This theory emphasizes the concept of decision making and approaches of solving problems. It encourages the adoption of strategic approach of planning, doing, checking and acting to ensure quality service delivery. Deming has 14 points to management which can lead to effective management of projects for quality services. Core concept of TQM practices can be on human management which emphasizes on leadership, team work, and training and employee involvement. According to Goetsch, et al, 2013, being aware of the knowledge of the organization then quality can be achieved in the organization where quality involves following processes using knowledge.

Daniel and Moses, 2015 quoted that the fourteen points of Deming's theory of total quality management are; Create constancy of purpose, Adopt the new philosophy, Stop dependencies on mass inspections, Don't award business based upon the price, Aim for continuous production and service improvement, Bring in cutting-edge on the job training, Implement cutting edge methods for leadership, Abolish fear from the company, Deconstruct departmental barriers, Get rid of quantity-based work goals, Get rid of quotas and standards, Support pride of craftsmanship, Ensure everyone is trained and educated and Make sure the top management structure supports the previous thirteen points (Chris, 2009, Aguayo, et al1990,Goetsch, et al,2013).). The theory contributes a lot to the study because it deals with managerial challenges facing the rural electricity distribution in Kenya.

2.2. Joseph Juran's Theory

This theory of Joseph Juran is responsible for "Quality Trilogy." Which means he argues for quality trilogy which is composed of quality improvement (it ensures that the infrastructure identified together with projects teams. More ever it ensures provision of resources to the project and training to the employees. Still under this there is establishment of controls), quality planning (establishment of project goals identifying the customers and their needs and ensuring customer satisfaction) and quality control evaluation of the performance and usage of resources). He emphasizes that if quality improvement has to be successful then actions must be planned and controlled well.

Jurans theory believes that there are ten steps to quality improvement which if well followed leads to quality services and products which includes the following: An awareness of the opportunities and needs for improvement must be created, Improvement goals must be determined, Organization is required for reaching the goals, Training needs to be provided, Initialize projects, Monitor progress, Recognize performance, Report on results and track achievement of improvements (Joseph Juran, 2009)and this makes the theory to be effective to the study. In electricity distribution projects in rural areas in Kenya the juarans trilogytheory can be effective because the projects performance can be improved if there is quality planning, quality improvement and quality control.

3. Empirical Literature Review

3.1. TQM Practice

Implementation of total quality management has been faced with a challenge of a common definition of the word quality according to many researchers. According to Al-abedallant, 2012 the pioneers of quality movement and gurus define quality as follows: Edward W. Deming defines quality as product or service that have ability to meet the expectations of the customers to ensure that they are satisfied, Philip B. Crosby's defines quality as "Conformance to requirements" and Fergenbaum defines quality as 'Total Composite product or service characteristic of marketing, engineering and maintenance in which products and services which are being used to meet the expectation of the customers'.

Total quality management principals and the management theories can give the total quality management practices which aim at controlling the wastage of resources and continuous improvement to provide quality services which satisfy the needs of the customers (Adair, 2004 and Emerald, 2005). TQM is a management philosophy which can be characterized by the following its principle and strategies which led to continuous improvement in quality, increased involvement of employees, effective leadership and commitment of top management, employee empowerment and motivation which lead to the teamwork of the employees, benchmarking, feedback and good relationship with suppliers (Faisal, 2013) All these practices and principal ensures that managerial challenges are solved in the organization. According to Joseph,O,2015, total quality management involves activities which can be done by top management to ensure quality planning, quality control of resources through monitoring and evaluation and quality assurance which leads to quality improvement of the organization improvement.

According to Shahin& Dabestani, 2011, total quality management embraces many things in the organization to determine its immediate customers and still determine its reputation in the community at large. And so, TQM is based on eight principals which are Creation of quality management environment; Development of Teamwork; Practice of quality control tools and techniques; focus on customer; focus on supplier relationship; Benchmarking; continuous improvement of processes; and involvement of employees (Islam& Haque 2012). This research will focus on four practices as shown on conceptual framework and in objectives.

3.2. Knowledge of Process Approaches

Process approaches involves overseeing how work can be performed in electricity distribution projects to ensure consistent outcome for quality services. It emphasis preventive and proactive approaches to quality management to reduce variation in the process and improve the quality of the services .It involves combination of machines, peopled employed, materials and tools in the production. Process management aims at reducing process variation by building quality in project implementation and in addition to this it

increases the quality of outputs as well and decreases the cost, Anderson et al, 1994. For process control and improvement process management category in the central requirement for identification and management of core competence to achieve efficient and effective process management. Process approaches may be ensure that results of the organization are effectively and efficiently achieved when the activities pertaining the organization are understood and managed as interrelated processes that function as a coherent system. Process management enhances the ability to focus on the important processes and opportunities for improvement to produce quality services in the rural electricity distribution projects in Kenya.

3.3. Continuous Improvement

Continuous improvement is the means for searching for everlasting improvements and continuing processes to findnew and better methods in the process of converting raw materials into final products/services (Sadikoglu & Zehir, 2010). TQM empowers every person in an organization to contribute and offer suggestion for improvement in quality for the products and services and it promotes continuous and sustained improvement in quality for the services which leads to quality culture of an organization (Talib et al,2012). The continuous improving of the services ensures that the customer expectations are met and can be done better by benchmarking in urban town in order to improve the activities which lead to quality services and achievement of the projects objectives. According toADB, 2012 electric power production and distribution projects can be affected by climatic conditions such as temperature changes , floods and storms which should be assessed to ensure there is reliable services in the rural areas through monitoring and evaluation to ensure corrective measures can be taken in time to ensure reliable services, Strategies for continued improvement requires: quality policy, quality objective, audit results, analysis of data and use of corrective and preventive actions and management reviews Gulali et al, 2015.Due to rapid changes in technology continuous improvement is very essential in production of quality services and products and still meets the changing customers' needs Gulali et al, 2015.

3.4. Employee Empowerment

Employee empowerment may include training and motivation and according to Zakuan et al., 2012 training is an important factor that can boost the effort of the employees which can lead to quality services. Employee knowledge broadening can be boosted by training at all levels in the organization which help them acquire knowledge to provide quality services to the customers. Employee empowerment is one of the TQM practices which influence the performance of project in organizations Jamali et al, 2010. Training and empowerment of project employees should equip them which skills and knowledge to implement total quality management to ensure quality services and customer satisfaction.

A TQM training program must equip employees with an understanding on the TQM program and their role in it. TQM implementation requires training and motivation of employee as critical factor to ensure continuous improvement in provision of quality services (Jamali et al, 2010).

Employee's empowerment can bring them in good decision making, provision of opportunities for continuous improvement and service for product improvement. More ever team work can tap ideas, innovations and creativity in the employees which can lead to project success and customer satisfaction.

According to Adolfas, 2013, any government funded project should have effective quality systems which should achieve customer satisfaction and employee empowerment to ensure quality products/services. through

3.5. Top Management Leadership

Top management leadership is important in quality management which can lead to quality performance hence quality service and satisfaction of the customers (Nyangiro, 2012). Top management are the drivers of TQM implementation, which can establish values, goals and systems which can satisfy customers needs and expectations and improve the projects performance.(Adolfas,2013). Effective leadership can influence the community participation, effective communication and effective monitoring and evaluation of electricity distribution projects which enhances ownership of the projects and assist in implementation of projects ensuring customer satisfaction. Good leadership promotes strategic planning, policy making and decision making of REA and KPLC project managers (Zakuan et al, 2012). The senior management makes sure that they will provide the required resources in time to ensure provision of the services at the in time to ensure customer satisfaction. According to Deming theory, managers should ensure that leadership should provide quality transformation process by providing established and clear mission, vision and plan statement regarding the projects (zakuan et al, 2012).

According to Deming theory top management should lead the whole organization in drive for improving quality in all activities in an organization by providing effective communication, having strategic planning, providing proper encouragement and offering effective training. Arshida & Agil (2012) points out top management commitment and leadership as an essential element for ensuring successful TQM implementation and it is very important for ensuring the success of quality management practices in all organizations. The top management of electricity distribution projects in rural areas must be on the fore front of the quality management process starting from the initial stages to so solve most of the managerial challenges faced in implementation of the projects. According to Omware (2012), adoption of TQM for the first time is associated with development of new organizational policy, new procedures and new tools that must be learned. TQM is an organizational change process that is often associated with instability, confusion, and employees' resistance and must be carefully initiated by the electricity distribution project managers through consistent management involvement and effective communication to all level of management. This was consistent with Samir (2003) study that top management must develop clear quality mission and goals and identify quality values and communicate them to all employees. They must put in place a proper quality planning process, and a good quality management structure to ensure successful implementation

4. Discussion

Empirical review reviews clearly that some TQM practices which influence consumer focus leading to customer satisfaction include; knowledge of process approaches, continuous improvement, top management leadership and employee's empowerment and has a lot of influence to the rural electricity distribution projects. The main objectives of the study are to determine the influence of the TQM practices on the performance of the rural electricity distribution projects. The study established that the managerial challenges facing rural electricity distribution projects if well addressed by use of TQM practices can lead to quality services and reliable distribution of electricity in the rural areas in Kenya which can lead to socio-economic development.

In Kenya, the government and NGOs are trying to finance rural electrification to ensure vision 2030 is achieved.

According to previous studies, it is clear that knowledge and proceed approach as TQM practices influences performance of the most projects by focusing on set procedures and guidelines which increases the quality of goods and services hence customer satisfaction. Employee empowerment practices influences the motivation of the employees and enhancement of the skills which lead to better services and satisfaction of customers.

Continuous improvement is a TQM practice which influences the performance of most projects through effective monitoring and evaluation of the project implementation. Rural electricity distribution projects need monitoring and evaluation to ensure reliable services and sustainable projects which lead to customer satisfaction. More ever effective top management leadership as a TQM practice can influence the performance of the projects due it effective communication, better ways of handling the employees, good procurement planning, all these influences the performance of the projects.

In Kenya, rural electricity distribution projects managerial challenges can be solved by implementing the TQM practices in the process of implementing the projects and so this study intends to solve the challenges.

5. References

i. Abednego M. K. Assessing the welfare incidence of public spending: a case of Kenya's rural electrification program International Journal of Business and Commerce Vol. 3, No.9: May 2014[36-65] (ISSN: 2225-2436)

ii. Crosby, P. B. (1979). Quality Is Free. New York: New American Library

iii. Deming, W. E. (1995). Out of Crisis. Cambridge, Mass.: MIT Center for Advanced Engineering Study.

iv. Duflo, E., Kremer, M., Robinson, J., 2011. Nudging farmers to use fertilizer: theory and experimental evidence from Kenya. Am. Econ. Rev. 101 (6), 2350–2390.

v. Electrification projects in Kenya: A case study of Rural Electrification Authority, International Journal of Social Sciences and Entrepreneurship. Vol.1, Issue 2, 2013, 1 (2), 549-560

vi. Gulali Indiya Donald, Odoyo Collins Otieno, John Mark Obura, Beatrice Abong'o, Charles Ondoro. Effect of Implementing QualityManagement System on the Performance of Public Universities in Kenya: A Case of Maseno University, Kenya. American Journal of Business, Economics and Management. Vol. 3, No. 3, 2015, pp. 145-151.

vii. IEA (International Energy Agency), 2013. World Energyn Outlook.⟨http://www.worldenergy-outlook.org/publications/weo-2013/⟩.

viii. IEA (International Energy Agency), 2012. World Energy

ix. Islam. A. and Haque, A. F. M. (2012). Pillars of TQM implementation in manufacturing organization-an empirical study, Journal of Research in International Business and Management, Vol. 2(5) pp. 128-141

x. Jamali G., Ebrahimi M and Abbaszadeh A. M. (2010). TQM Implementation: An Investigation 25 of Critical Success Factors. International Conference on Education and Management Technology

xi. Karlan, D., Osei, R.D., Osei-Akoto, I., Udry, C., 2014. Agricultural Decisions after Relaxing Credit and Risk Constraints. Q. J. Econ. 129 (2), 597–652.

xii. Khandker, S.R., Samad, H.A., Ali, R., Barnes, D.F., 2012. Who benefits most from rural electrification? Evidence in India. Policy Research Working Paper 6095, World

xiii. Manuel, B., Torero, M., 2014. Short Term Effects of Household Electrification: Ex-Dinkelman, T., 2011. The Effects of Rural Electrification on Employment: New Evi-dence from South Africa. Am. Econ. Rev. 101 (7), 3078–3108.

xiv. Mohammad Namazi Vol. 5(2), pp. 38-47, July 2013DOI: 10.5897/JAT11.032 ISSN 2141-6664 © 2013 Academic Journalshttp://www.academicjournals.org/JATrole of the agency theory in implementing management's control.

xv. Nyangilo, A. O. (2012). An assessment of the organization structure and leadership effects on construction projects 'performance in Kenya: a case study of public building projects within Nairobi region, Thesis. University of Nairobi.

xvi. Ooi K.B., et al. Are TQM Practices Supporting Customer Satisfaction and Service Quality? Journal of Services Marketing.2011.25(6)

xvii. Outlook.⟨http://www.worldenergy-outlook.org/publications/weo-2012/⟩ Jack, W., Suri, T., 2011. Mobile Money: The Economics of M-PESA. National Bureau of Economic Research, Cambridge, MA

xviii. Sadikoglu, E. & Zehir, C. (2010). Investigating the Effects of Innovation and Employee Performance on the Relationship between TQM Practices and Firm Performance: An Empirical Study of Turkish Firms. International Journal of Production Economics, 12, 13-26.

xix. Stephen. M. K Determinants of Timely Completion of Projects in Kenya: Case of Kenya Power and Lightning Company, Thika. ABC Journal Advanced Research, vol3 No,2 2014.

xx. Talib F, Rahman Z, Qureshi M (2012) Impact of Total Quality Management and Service Quality in the Banking Sector. J, Telecommunications System & Management

xxi. Wambugu, D. M. (2013), Determinant of successful completion of rural Electrification projects in Kenya: A case study of Rural Electrification Authority, International Journal of Social Sciences and Entrepreneurship. Vol.1, Issue 2, 2013, 1 (2), 549-560