FACTORS AFFECTING THE IMPLEMENTATION OF ELECTRICITY POWER EXPANSION PROJECTS IN KENYA. A CASE OF KENYA POWER AND LIGHTING COMPANY

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ABSTRACT
The purpose of this study was to investigate factors affecting effective implementation of electricity power expansion projects in Kenya: A case of Kenya Power Company. The specific objectives were to examine the influence of top management support, financial resources, community support and procurement procedures on effective implementation of electricity power expansion projects in Kenya. This study adopted a descriptive research design for the study. The target population was 66 respondents comprising of 6 project managers and 60 Project Team members. Census sampling was used to select project managers and stratified random sampling to select the project team members. The sample size was 33 and the data collection instruments adopted was questionnaires for the project team members and interviews for the project managers. Content analysis was used to analyze the qualitative data and Quantitative data was analyzed using descriptive statistics such as frequencies, percentages, charts, table and graphs with the use of Statistical Package for Social Sciences (SPSS) version 20.0. The study also used Analysis of Variance (ANOVA) to test the level of significance of at 95% confidence level. In addition, the study conducted a multiple regression analysis to test the relationship between the independent variables and dependent variable. The study concluded that top managers in Kenya Power effectively communicate the requirements of the project to all the parties concerned and carries out an evaluation of the project progress periodically to check for any deviations, Project budgeting is performed at the initial stages of project planning and usually in parallel with the development of the project schedule. Financial difficulties are a major cause of poor implementation of projects leading to delay in the timely completion of the expansion of projects in Kenya Power, Community awareness is done on the importance of providing way leave. Need analysis is done before contracting. The study recommends that Kenya Power should ensure that all the stakeholders are involved during project planning and motivate employees based on their performance, set objectives, assess assets and resources, estimate future financial needs and making plan to achieve monetary goals and also the financial activities should be planned for, recorded, monitored and controlled for effective project implementation, continue encouraging potential consumers to connect to power and set up a rural electrification committee to represent the local community and carry out a rigorous analysis during contractor selection to identify the best contractor.

Key Words: Top Management Support, Financial Resources, Community Support, Procurement Procedure, Implementation of Electricity Power in Kenya
Background to the Study
Crawford and Bryce (2013) observe that a project is only successful if it comes on schedule, on budget, it achieves the deliverables originally set for it and it is accepted and used by the clients for whom the project was intended. Clark (2009) contends that different people measure project success in different ways at different times. Clark (2009) also found that the satisfaction of the key project stakeholders, including the customer, was the overriding measure of project success, with stakeholders being satisfied if their quality related criteria were met.

Completion of projects within schedule is a major contribution towards the competitive edge in organizations. This is based on the realization that the achievement of the targeted objectives is determined by the ability to deliver the targeted output within the stipulated time, (Stephen, 2014). Throughout the world, the business environment within which construction organizations operate continues to change rapidly. Organizations failing to adapt and respond to the complexity of the new environment tend to experience survival problems (Wustenhagen et al., 2007). With increasing higher users’ requirements, environmental awareness and limited resources on one side, and high competition for construction business marketplace on the other side, contractors have to be capable of continuously improving their performance (Loring, 2007). A project is considered successful if the project is delivered on time, on schedule and acceptable quality. However, measuring project success is a complex task since success is tangible and can hardly be agreed upon (Clark, 2009).

Brazil is covered by a huge amount of rivers, which makes more than 75% of electric energy framework, about 100,000 MW, is constituted by hydropower plants. This characteristic allows Brazil to be in an advantageous position comparing to other countries (Castro et al., 2011). Castro et al (2011) adds that the hydropower plant construction has been in existence since 1970s, and mostly during the military government, an important support for the national economic development. However, even though Brazil still has a great hydropower potential to be explored, the hydropower generation expansion has been very restricted. Considering that the implementation of a hydropower plant is a long-term project, uncertainties reflect right on the development of these projects and if there is any unexpected stop, the project can take a very long time to be restarted. As a result of that, there is a lack of new projects to be developed in the sector portfolio, which decreases the quantity of enterprises that can be offered in the energy auctions (Divakar & Subramanian, 2009).

In China, Zhang et al (2012) note that, much of the renewable resources are in regions with low energy demand, such as Inner Mongolia and Xinjiang. Because the need for electricity could be hundreds or thousands of kilometers away, there are serious questions about the ability of China’s already shaky transmission system to handle the movement of these large amounts of electricity. Where transmission capacity is not sufficient, it will be impossible to invest in transmission lines. In fact, some laws limit the amount of renewable electricity that can be supplied to the local grid because of concerns about the additional burden on the transmission system (Zhang et al., 2012).

According to African Development Bank (ADB) the key challenges facing Africa’s power sector are inadequate generation capacity, limited electrification, low power consumption, unreliable services, high costs, and a financing gap of approximately $23 billion a year. These challenges call for a paradigm shift in the development of the power sector that seeks to use the vast renewable resources of the continent, including hydro-
potential. In electrical power installation projects, different activities are involved and hence the need for proper management to ensure that materials and works are procured and supplied within schedule (Wamukonya, 2013).

According to Stephen (2014), the electric power supply in Kenya is significantly insufficient and covers a mere 20% of the population. Experience has shown that past electric power projects have not realized the expectations in terms of their implementation and quality at entry. Stephen (2014) adds that in 2009, Kenya witnessed a significant reduction in electric power supply compared to the demand. This situation is attributed to the country’s overreliance on hydroelectric power, which is greatly influenced by climatic variations. Many projects have therefore emerged with an intention of mitigating this deficit. One of such projects is Thika Power project, which was expected to generate 80 MW on its completion.

The energy sector is an important sector because energy plays a key role in enabling economic growth (Stern, 2011). Kenya has a long-term development strategy, The Vision 2030, whose aim is to drive the country into a globally competitive and prosperous economy with high quality of life. Covering the period 2008 to 2030, the country’s new development blueprint aims to transform Kenya into a newly industrializing, “middle-income country providing a high quality life to all its citizens by the year 2030.” The Medium-Term Plan (MTP-2008 to 2012) was prepared to implement the first phase of the strategy. The energy sector has been restructured as per the Sessional Paper No.4 of 2004 and the Energy Act No.12 of 2006.

The institutional arrangement in the electricity sub sector in Kenya comprises-the Ministry of Energy (MOE), Energy Regulatory Commission (ERC), Kenya Generating Company (KenGen), Kenyan Power and Lighting Company (KPLC), the Rural Electrification Authority (REA), Kenya Electricity Transmission Company (KETRACO), Geothermal Development Company (GDC) and Independent Power Producers (IPPs). The level and the intensity of energy use in a country is a key indicator of economic growth and development. The Kenya Vision 2030 identified energy as one of the infrastructure enablers of its social economic pillar. Sustainable, affordable and reliable energy for all citizens is a key factor in realization of the Vision.

Statement of the Problem
Kenya like any other developing country is not an exception in facing an energy problem. According to International Energy Agency (IEA) (2008) overall electricity access rates in Sub-Saharan Africa (SSA) in 2008 was estimated at 28.5%, with the urban and rural area figures standing at 57.5% and 11.9%, respectively. Likewise, in Kenya, inadequate electricity generation capacity and an unreliable power supply have been perennial problems for over a decade (Nyoike, 2002). According to the Ministry of Environment and Natural Resource (2005) indicated that over 70% of total population in Kenya derive their source of energy from wood based where more than 93% of rural households depend on this source. KPLC (2006) electrification in Kenya’s is below the SSA average with 15% overall access and a breakdown of 51.3% and 5% for urban and rural areas respectively. Statistics from Rural electrification Authority (REA) show that rural electrification has increased from 4 per cent in 2003 to 28 per cent in June 2012 (REA, 2012).

The connectivity to electricity also varies from region to region; Nairobi 53.47%, Central 42.4%, North Eastern 14.5% and Western 14.7% (Kioko, 2013). Furthermore, the REP funds obtained from a 5% levy have been mandatory at the county level for all those electrified, thus, it is expected that this would have provided substantial income for achieving the desired increased rural coverage.
However, this electrification in Kenya’s is below the SSA average with 15% overall access and a breakdown of 51.3% and 5% for urban and rural areas respectively. Despite this ambition, Kenya’s rural population access to electricity is considerably lower than that of the urban population (more than 80%), with some 99.5% of rural households not having access to electricity (Rabah, 2005).

Kenya’s installed capacity for electricity generation is estimated at 1,600 Megawatts according to the Kenya National Bureau of Statistics economic indicators (2012). This is against the population which has access to the electricity is less than 20% (KNBS economic survey 2012). According to the vision 2030 strategic plan, the national access to electricity is estimated at 20%, but the government of Kenya as part of its Vision 2030 aims to increase access to 40% by 2020. As per the Kenya power resettlement plan 2012, the current proportionate power demand by regions is estimated at 50%in Nairobi, 20% in west Kenya, 20% in the coast region as well and 10% in the mount Kenya region. This shows that the demand in the city of Nairobi is higher than the vision 2020 projections. Therefore, this study sought to investigate factors affecting effective implementation of electricity power expansion projects in Kenya Power.

General Objective
The general objective of this study was to investigate factors affecting effective implementation of electricity power expansion projects in Kenya: A case of Kenya Power.

Specific Objectives
This study was guided by the following specific objectives:

- To examine the influence of financial resources on effective implementation of electricity power expansion projects in Kenya
- To establish the influence of community support on effective implementation of electricity power expansion projects in Kenya
- To identify the influence of procurement procedures on effective implementation of electricity power expansion projects in Kenya

LITERATURE REVIEW

This chapter deals with the theoretical review, conceptual framework and empirical review.

Theoretical Review

Stakeholder theory
The basic idea of stakeholder theory is that organizations have relationships with many constituent groups and that it can engender and maintain the support of these groups by considering and balancing there relevant interests (Kirsi, 2010). Kirsi (2010) further noted four premises of the stakeholder theory that; corporations have relationships with many constituent groups (stakeholders) that affect or are affected by its decisions, the theory is also concerned with the nature of these relationships in terms of both processes and outcomes for the firm and its stakeholders, that the interests of all (legitimate) stakeholders have intrinsic value and not one set of interests is assumed to dominate others, and finally the theory focuses on managerial decision making. Based on the argument of instrument of power of this theory, a company using stakeholder approach will have increased organizational performance in terms of economics and other criteria (Hasan & Kamil, 2010).

Though, Blattberg (2004) criticized stakeholder theory for assuming that the interests of various stakeholders can be compromised or balanced.
against each other, the researcher did not propose any other alternative apart from recommending negotiation and dialogue for dealing with conflicts between stakeholder interests. Kirsi (2010) noted that while having its origins in strategic management, stakeholder theory has been applied to a number of fields, presented and used in a number of ways that are quite distinct and involves very different methodologies, concepts, types of evidence and criteria of evaluation.

Theory of Constraints
Theory of constraints (TOC) began as a production scheduling aid, developed by Eliyahu Goldratt in the late 1970s, terming it as ‘optimized production time table’ and was quickly developed in to a software package commonly known as optimized production technology (Davis & Mabin, 2009). Ten years later, due to failures caused by the expectations associated with a turnkey package led Goldratt and others to realize that what was needed was to convince people to change ways, rather than tailor the package to simply automate their old policies and procedure – changes to their thinking and actions were needed if the potential gains were to be realized (Davis & Mabin, 2009).

According to Togar et al (2004) TOC aims to initiate and implement breakthrough improvements through focusing on a constraint that prevents a higher level of performance, further noting that TOC paradigm essentially states that every firm must have at least one constraint. Goldratt and Cox defined constraint as any element or factor that limits the system from doing more of what it was designed to accomplish - that is achieving its goal (Togar et al, 2004).

Sebastiano and Ragnhild (2014), revealed that what is considered as a constraint in project management can be categorized in to four; as political constraints (such as defined vision, mission, scope of projects), technical constraints (such as competencies, technologies, existing infrastructure and natural conditions like geology, landscape and climate), social constraints (such as codes of conduct, organizational hierarchies, personal relationships and accepted/expected behaviors) and administrative constraints (such as budgets, project schedules, scope, written contractual agreements among others).

Theory of Constraints (TOC) challenges managers to rethink some of their fundamental assumptions about how to achieve the goals of their organizations, about what they consider productive actions, and about the real purpose of cost management.

Conceptual Framework

![Conceptual Framework Diagram]

Figure 1: Conceptual Framework
Top Management Support

A project manager is accountable for delivering project outputs. However, as a project is a complex endeavor, project managers can expect support from others in the organization. Particularly, the active involvement of senior managers of the performing organization can help project managers to successfully complete the project. Consistently, the project management literature has found that top management support positively contribute to project success (Besner & Hobbs, 2008). According to Johnson et al (2009) top management support is considered to be among project management Critical Success Factors (CSFs). This means that the more top management processes are practiced in organisations, the higher the level of project success is. However, with executive limited time and resources, it is also important to identify the most effective support processes for different project scenarios.

Zwikael (2008) supports the high importance of top management involvement in projects and concludes that different top management support processes should be implemented in any industry and culture. This statement is aligned with a project management belief that there is no “one size” for managing projects (Dvir et al., 2006). Another support for this approach is the different extent of use of various project management processes across different industries (Pennypacker & Grant, 2003). According to this approach, various project scenarios (for example, different industries, cultures and level of project complexity) have dissimilar needs. As a result, different management styles may be applicable for each project scenario. With relation to top management support, this means that unique top management support processes may be best used in different project scenarios.

Kandelousi et al (2011) mentioned that top management support can be viewed in several forms, for example, helping teams in dealing with hurdles, exhibiting commitment to the work and encouraging the subordinates. Usually top management support results in availability of in time financial resources, allocation of human and other physical resources and also it refers to the delegation of necessary power to project leaders and project team for successful completion of projects. Moreover, top management support is important recommendation in achievement of project success (Lin, 2010). In contrast, top management cannot provide even the due support to each and every project in the organization (Young & Jordan, 2008) therefore, they must realize the existence to project leaders who are directly involved in day to day activities of project.

Meredith and Mantel (2010) argued that if external environment remains the same top management support enables the project leader to execute project successfully. In case of non-support from top management, the project (s) may fail at any stage of project and usually it results in non-availability of in time resources. Furthermore, project leaders should also possess good relationship with top management in addition to required technical and administrative skills to make project successful (Morgan, 2012).

Top managers play a crucial role in providing and creating the needed conditions for the project success (Staehr, 2010). Moreover, top management generally, plays an important role in defining the scope of a project and selection of project team as well (Boonstra, 2013). In addition, they remain in a position to structure the context of the organizations and they also facilitate the provision of resources. Usually top management support results in availability of financial resources, in-time allocation of human and other physical resources and also it refers to the delegation of necessary power to project leaders and project team for successful completion of projects (Kandelousi et
Moreover, Ofer (2008) argued top management support is the main ingredient in ‘project success recipe’. In prior studies relationship between top management support and project success has been reported positive and significant.

Financial Resources
Finance is a major resource in project, without which it cannot operate and so the resource should be given the attention it deserves if the youth projects have to survive. Financial activities in any organization should be planned for, recorded, monitored and controlled if the projects have to be sustainable. Massie (2006) noted that the demand for careful project planning has made financial management a key activity in organizations and projects in general. Financial Management is the process of managing the financial resources, including accounting and financial reporting, budgeting, collecting accounts receivable, risk management, and insurance for a business.

According to Madison (2009), financial planning involves setting objectives, assessing assets and resources, estimating future financial needs and making plan to achieve monetary goals. Madison (2009) continued to suggest that, one systematic approach for attaining effective management performance is financial planning, budgeting and that sustainability of any project lies in effective financial management right from the implementation stage to post implementation phase. It is important to lay and plan our budget for the amount of money received (Kiogora, 2013).

Massie (2006), points out that financial statements contain valuable information that managers can use to analyze past performance of a project. Stoner et al (2007) noted that financial statements are used to track the monetary value of goods and services into and out of the organization. Sanga (2009) who argued that proper record keeping sustains and expands an organization and without it the business runs a risk of hitting cash flow crunches wasting money and missing out opportunities to expand. This then calls for the project managers to have a careful financial management strategy to guarantee the sustainability of these projects.

Wernham (2004) observes that in a project planning process, resources such as people, skills, facilities and money to implement the strategy must be adequate. Many organizations today are focusing on becoming more competitive by launching competitive strategies that give them an edge over others. To do this, they need to craft workable strategies. Effective implementation of any projects depends on rational and equitable resource allocation across the organization and investment. Resource allocation helps strategic managers to coordinate operations and facilitates control of project performance. It is important to have a budget for the whole organization or sub-unit. The financial objectives of all the departments should be indicated. The project activities should be linked to the annual business plan (Birnbaum, 2000).

Community Support
Expansion of electricity projects benefit more by involving local communities or suffer from absence of it (Vinod, 2003). In Bangladesh, setting up rural electrification committees to represent the local communities during project implementation helped in smooth implementation of projects through educating consumers, promoting wider use of electricity and obtaining right of way or way leave as well as encouraging consumers to connect power (Vinod, 2003). In Thailand, local leaders were encouraged to raise and contribute funds so that their constituents’ can be supplied before planned time (Barnes & Floor, 2010).

Barnes and Floor (2006) show clearly that rural electrification programs can benefit greatly from the involvement of local communities or suffer because
of its absence. Setting up a rural electrification committee to represent the local community can do, much to smooth the implementation of the program. The committee can play a crucial role in helping assess the level of demand, educating consumers in advance, encouraging them to sign up for a supply, and promoting the wider use of electricity.

**Procurement Procedures**

The common assessment of the success of construction projects is that they are delivered on time, to budget, to technical specification and meet client satisfaction (Turner, 2009). However, the criteria for success are in fact much wider, incorporating the performance of the stakeholders, evaluating their contributions and understanding their expectations. Successful construction project performance is achieved, when stakeholders meet their requirements, individually and collectively (Atkinson et al., 2007). The UK working groups on Key Performance Indicators (KPIs) have identified 10 parameters for benchmarking projects in order to achieve a good performance in response to Egan’s report (2008). However, most of these indicators, such as construction cost, construction time, defects, client satisfaction with the product and service, profitability and productivity, promote result-orientated thinking, whereas predictability of design cost and time, and predictability of construction cost and time, and safety can be regarded as process-orientated thinking.

The complexity of construction projects makes it very important for the client to select a construction company that is able to cope with all aspects of the building process, thereby increasing the chance of a successful execution of the project. The importance of this selection process is often underestimated (Kumaraswamy & Matthews, 2008). Some researchers even argue that the contractor selection procedure is the most important client decision in a construction project (Odosute & Fellows, 2007; Fong & Choi, 2009). However, the process is also being recognized as intricate due to the high levels of risk involved with entrusting the entire project to one contractor (Schieg, 2006), again showing the importance of contractor selection.

According to Navon & Berkovich (2006), the main responsibility in any organization is to formulate master programme for the timely provision of materials, components and work-in-progress. Stevenson (2008) explained that contractor competence in terms of delivery of goods and services including materials and goods flowing in and out of a production facility as well as its internal handling has become very important to an organization to acquire competitive advantages, as the company’s struggle to deliver the right product at the correct place and time. The main aim is to actually promote, with low cost, a flow whose velocity allows the execution of manufacturing process with expected satisfaction level.

**Empirical Review of Literature**

Swink (2010) in an extensive examination of 20 failing projects over a period of 18 years expanded this criteria of success as: “satisfies stakeholder groups, meets functional requirements, meets quality expectations and requirements, within cost, within deadline, delivers sustained and actual benefits and provides the team with professional satisfaction and learning”. Although the causes for project success and failure have been the focus of numerous research studies, there has been no consensus on the issue. Ghana, as a developing country, is faced with a myriad of project management challenges both technical and non-technical. For example, the very nature of project funding in Ghana poses a significant challenge for government as well as non-governmental agencies (Swink, 2010).
The impact of top management support
The literature of project management makes a strong sense for realizing and recognizing the importance of top management support (McComb et al., 2008). Furthermore, Green (2009) concluded after investigating the 213 R & D projects that the projects with top management support were less likely to be unsuccessful. In addition, Green (2009) termed the project with top management support as “sacred cows” which means that these types of projects seldom fail. Moreover, while studying the implementation of projects, several researchers have reported various aspects of top management support. For example, Guimareas and Igbaria (2007) argued that top management interests, understandings and encouragements are much important elements for project success. While of the researchers suggested that for successful implementation of projects, top management should represent themselves as project champions (McComb et al., 2008; Naranjo-Gil, 2009).

The scope of project leadership is wide as compared to traditional project management (Sumner et al., 2006). Similarly, project managers’ leadership has significant impact on project success (Geoghegan & Dulewicz, 2008). Moreover, leadership has been considered as influential source for achieving the organizational success but still in project management role of project managers as leaders need to be discussed in detail (Turner et al., 2009). In addition, Young and Jordan (2008) discussed that top management support is often, discussed as a paradigm which is related to the project success alone. Although some authors realized top management support with some desirable behaviors and attitudes (McComb et al., 2008; Naranjo-Gil, 2009), but they ignored the existence of top management as supporting variable to project leadership in relation to project success.

Availability of financial resources
Funding is a crucial part of any creative project or business. Project finance is the long-term financing of infrastructure and industrial projects based upon the projected cash flows of the project rather than the balance sheets of its sponsors (Kerzner 2009). Usually, a project financing structure involves a number of equity investors, known as 'sponsors', as well as a 'syndicate' of banks or other lending institutions that provide loans to the operation (Kerzner 2009). They are most commonly non-recourse loans, which are secured by the project assets and paid entirely from project cash flow, rather than from the general assets or creditworthiness of the project sponsors, a decision in part supported by financial modeling. The financing is typically secured by all of the project assets, including the revenue producing contracts. Project lenders are given a lien on all of these assets and are able to assume control of a project if the project company has difficulties complying with the loan terms.

Generally, a special purpose entity is created for each project, thereby shielding other assets owned by a project sponsor from the detrimental effects of a project failure. As a special purpose entity, the project company has no assets other than the project. Capital contribution commitments by the owners of the project company are sometimes necessary to ensure that the project is financially sound or to assure the lenders or the sponsors' commitment (Kerzner 2009).

Project finance is often more complicated than alternative financing methods. Traditionally, project financing has been most commonly used in mining, transportation, telecommunications and energy industries. More recently, particularly in Europe, project financing principles have been applied to other types of public infrastructure under public-private partnerships (PPP).
The influence of community Support

The study conducted by Bongani (2013) on stakeholder perception of socio-economic benefits of rural electrification in Zimbabwe disclosed that educated rural people observed a lot of benefits from rural electrification while uneducated people did not realize and appreciate the importance of rural electrification. The study though important did not reveal, how that perception affected effectiveness of rural electrification program. It also did not cover other stakeholders other than direct beneficiaries of rural electrification program. Further, the study did not disclose how the rural population participated in rural electrification implementation program.

Thomsett (2012) in an extensive examination of 20 failing projects over a period of 18 years expanded this criteria of success as: “satisfies stakeholder groups, meets functional requirements, meets quality expectations and requirements, within cost, within deadline, delivers sustained and actual benefits and provides the team with professional satisfaction and learning”. Although the causes for project success and failure have been the focus of numerous research studies, there has been no consensus on the issue. Ghana, as a developing country, is faced with a myriad of project management challenges both technical and non-technical. For example, the very nature of project funding in Ghana poses a significant challenge for government as well as non-governmental agencies (Ofori & Sakyi, 2006).

Importance of procurement procedures

According to Kirungu (2011), the implementation of the Financial and Legal Sector Technical Assistance Project (FLSTAP) under the Ministry of Finance has failed to achieve its goals within stipulated project timelines due to the challenges attributable to constrained both World Bank (WB) and Government of Kenya (GOK) procurement systems. The project aims to achieve a sound financial system and strengthen the legal framework and judicial capacity that would ensure broad access to financial related legal services. The achievement of this objective has been aided through procurement of goods & services, consultancy and training. According to World Bank Report (2009), the current average project funds absorption rate was less than 10% per annum. This scenario has been blamed on an inefficient and bureaucratic procurement system. The policies and guidelines governing the implementation of Donor Funded Projects are said to be too lengthy and subject to several steps of review by both the donor and the borrower. This applies especially in the guidelines governing the selection and employment of Consultants by World Bank Borrowers.

Kirungu (2011) established that 11% of the respondents believed that the policies have a great effect on the implementation of the donor funded projects, 20% great effect while another 22% reported moderate effect. Kirungu (2011) concludes that the major implementation obstacles for donor funded projects implementation is procurement policies and donor guidelines due to bureaucracy which results in low disbursement of donor funds. The fact that both donor and GoK procurement policies and guidelines are applied concurrently only serves to compound an already worse implementation situation.

In Japan, only five processes have been found to significantly impact project success. An analysis of these processes suggests increasing project managers’ involvement in project initiation and training and improving professionalism using new tools and techniques, PMO support and quality management, which is considered to be a core area in Japan (Zwikael et al., 2005). In Israel, the existence of a project success measurement system has been found to be a critical process. This finding may encourage managers to impose the implementation of a success measurement system.
in projects. As the Israeli culture desires to leave some room for ongoing negotiation, senior managers can insist that project objectives are officially approved before projects begin (Zwikael et al., 2005).

RESEARCH METHODOLOGY

Research Design
This study adopted a descriptive research design for the study.

Target Population
The target population was 66 respondents comprising of 6 project managers and 60 Project Team members.

Sample and Sampling Techniques
Stratified random sampling was used to select the project team members while census sampling was used to select project managers.

Sample Size
The sample size was 33 comprising 3 project managers and 30 project team members picked randomly. Fischer’s formula was used to determine the sample size.

Data Collection Procedures
The data collection instrument was questionnaires for the project team members and interviews for the project managers.

Data Analysis and Presentation
The nature of data obtained from this study was both quantitative and qualitative. Quantitative data was mainly from the close ended questions and qualitative data emanated from the open ended items in the questionnaires and interviews.

RESEARCH FINDINGS AND DISCUSSIONS
This chapter discusses the findings, presentation, interpretation and discussion of the findings obtained from the field.

Response Rate
The study targeted a sample size of 33 respondents from which all the 3 project managers were interviewed giving a 100% response rate and out of 30 project team members, 28 filled in and returned the questionnaires making a response rate of 93.3%.

Gender
The study sought to determine the gender of the respondent and therefore requested the respondent to indicate their gender. Majority (57.1%) were male and 42.9% were female. These findings show that both genders were involved in this study and thus the findings of the study did not suffer from gender biasness.

Respondents’ Work Experience
On work experience, the study revealed that most (35.7%) of the respondents had worked with the organization for duration of between 6 and 9 years, 28.6% for a period of over 10 years, 21.4% for a period of between 2 and 5 years and 14.3% for a period less than 2 years.

Education level
The study requested the respondents to indicate their highest level of education achieved, from the research findings, the study revealed that most of the respondents 46.4% of the respondents held University degree, 25.0% of the respondents were holders of post graduate diploma, 21.4% of the respondents were holders of Master’s Degree whereas 7.1% of the respondents held Diploma/College certificates. On the other hand, majority (75.0%) of the respondents indicated that they had a certification on project management while 25.0% did not have. This implies that respondents were well educated which means that they were in a position to respond to research questions with ease.
Top Management Support
The first research objective sought to examine the influence of top management support on effective implementation of electricity power expansion projects in Kenya. From the research findings, majority (82.1%) agreed that top management support influences the successful implementation of electricity power expansion projects in Kenya Power while 17.9% disagreed. The respondents were further given a list of statements on a five-point likert scale to indicate their extent to which they concur regarding the influence of top management support on effective implementation of electricity power expansion projects in Kenya. These findings are in line with the findings of the Johnson et al. (2009) top management support is considered to be among project management Critical Success Factors (CSFs). This means that the more top management processes are practiced in organisations, the higher the level of project success is. However, with executive limited time and resources, it is also important to identify the most effective support processes for different project scenarios. Zwikael (2008) supports the high importance of top management involvement in projects and concludes that different top management support processes should be implemented in any industry and culture. This statement is aligned with a project management belief that there is no “one size” for managing projects (Dvir et al., 2006).

Financial Resources
The second research objective sought to examine the influence of financial resources on effective implementation of electricity power expansion projects in Kenya. From the research findings, majority (89.3%) agreed that financial resources influences the successful implementation of electricity power expansion projects in Kenya Power while 10.7% disagreed. The respondents were further given a list of statements on a five-point likert scale to indicate their extent to which they concur regarding the influence of financial resources on effective implementation of electricity power expansion projects in Kenya. These findings concur with the findings of Massie (2006) who noted that the demand for careful project planning has made financial management a key activity in organizations and projects in general.

Community Support
The third research objective sought to establish the influence of community support on effective implementation of electricity power expansion projects in Kenya. From the research findings, majority (67.9%) agreed that community support influences the successful implementation of electricity power expansion projects in Kenya Power while 32.1% disagreed. The respondents were further given a list of statements on a five-point likert scale to indicate their extent to which they concur regarding the influence of community support on effective implementation of electricity power expansion projects in Kenya. These findings agree with the findings of Vinod (2003) who observed that expansion of electricity projects benefit more by involving local communities or suffer from absence of it. Barnes and Floor (2006) show clearly that rural electrification programs can benefit greatly from the involvement of local communities or suffer because of its absence.

Procurement Procedures
The third research objective sought to identify the influence of procurement procedures on effective implementation of electricity power expansion projects in Kenya. From the research findings, majority (82.1%) agreed that procurement procedures influence the successful implementation of electricity power expansion projects in Kenya Power while 17.9% disagreed. The respondents were further given a list of statements on a five-
point likert scale to indicate their extent to which they concur regarding the influence of procurement procedures on effective implementation of electricity power expansion projects in Kenya. These findings are in line with the findings of Atkinson et al (2007) who indicated that the criteria for success are in fact much wider, incorporating the performance of the stakeholders, evaluating their contributions and understanding their expectations. Successful construction project performance is achieved, when stakeholders meet their requirements, individually and collectively.

Implementation of Electricity Power Expansion Projects

majority (32.1%) of the respondents disagreed that all the projects have been delivered on time, 28.5% strongly agreed, 21.4% strongly disagreed, 17.9% agreed with a mean of 2.4 and a standard deviation of 0.503. Majority (32.1%) strongly agreed that all the projects have been delivered within the budget, 28.6% disagreed, 21.4% agreed, 14.3% strongly disagreed, 3.6% undecided with a mean of 2.6 and a standard deviation of 0.498. Majority (35.7%) strongly agreed that all the projects have been delivered within the specified requirements, 32.1% agreed, 17.9% disagreed, 7.1% undecided and strongly disagreed with a mean of 0.467.

These findings agree with the findings of Sumner et al (2006) who observed that the scope of project leadership is wide as compared to traditional project management. Similarly, project managers’ leadership has significant impact on project success (Geoghegan & Dulewicz, 2008). Moreover, leadership has been considered as influential source for achieving the organizational success but still in project management role of project managers as leaders need to be discussed in detail (Turner et al., 2009). In addition, Young and Jordan (2008) discussed that top management support is often, discussed as a paradigm which is related to the project success alone.

Regression Analysis

According to Kothari (2004) regression analysis is a statistics process of estimating the relationship between variables. This study adopted a multiple regression analysis so as to establish the relationship between the independent variables (Top management support, financial resources, community support and procurement procedures) and dependent variable (Implementation of electricity power expansion projects). The study applied SPSS version 20.0 to code, enter and compute the measurements of the multiple regression.

Table 1: Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>Change Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.699a</td>
<td>.703</td>
<td>.645</td>
<td>.345</td>
<td>2.784</td>
</tr>
</tbody>
</table>

Adjusted R squared is coefficient of determination which tells us the variation in the dependent variable due to changes in the independent variable. From the findings in Table 1 the value of adjusted R squared was 0.645 an indication that there was variation of 64.5% on the implementation of electricity power expansion projects in Kenya Power due to changes in top management support, financial resources, community support and procurement procedures at 95% confidence interval. This shows that 64.5% changes in the implementation of electricity power expansion projects in Kenya Power accounted to top management support, financial resources,
community support and procurement procedures.

R is the correlation coefficient which shows the relationship between the study variables and from the findings shown in the Table 1 is notable that there exists strong positive relationship between the study variables as shown by 0.703. Additionally, this therefore means that factors not studied in this research contribute 29.7% of the implementation of electricity power expansion projects in Kenya Power and a further research should be conducted to investigate the other factors (29.7%) that the implementation of electricity power expansion projects in Kenya Power.

Table 2: Analysis of Variance

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>10.142</td>
<td>4</td>
<td>0.467</td>
<td>2.784</td>
<td>0.001*</td>
</tr>
<tr>
<td>Residual</td>
<td>25.761</td>
<td>28</td>
<td>0.930</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>35.903</td>
<td>32</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Critical value = 1.397

From the ANOVA statics in Table 2, the study established the regression model had a significance level of 0.001 which is an indication that the data was ideal for making a conclusion on the population parameters as the value of significance (p-value) was less than 5%. The calculated value was greater than the critical value (2.784>1.397) an indication that top management support, financial resources, community support and procurement procedures all affects the implementation of electricity power expansion projects in Kenya Power & Lighting Company. The significance value was less than 0.05 indicating that the model was significant.

Regression Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>0.512</td>
<td>0.145</td>
</tr>
<tr>
<td>Top Management support</td>
<td>0.703</td>
<td>0.213</td>
</tr>
<tr>
<td>Financial Resources</td>
<td>0.814</td>
<td>0.087</td>
</tr>
<tr>
<td>Community Support</td>
<td>0.711</td>
<td>0.374</td>
</tr>
<tr>
<td>Procurement procedures</td>
<td>0.697</td>
<td>0.562</td>
</tr>
</tbody>
</table>

The finding revealed that holding independent variables constant (top management support, financial resources, community support and procurement procedures) to a constant zero, implementation of electricity power expansion projects in Kenya Power would be at 51.2%, a unit increase in top management support would lead to a unit increase in financial resources would lead to increase in the implementation of electricity power expansion projects in Kenya Power by a factor of 0.703, a unit increase in financial resources would lead to increase in the implementation of electricity power expansion projects in Kenya Power by factor of 0.814, a unit increase in community support would lead to increase in the implementation of electricity power expansion projects in Kenya Power by a factor of 0.711, a unit increase in procurement procedures would lead to increase in the implementation of electricity power expansion projects in Kenya Power by factor of 0.697.
electricity power expansion projects in Kenya Power by a factor of 0.711 and a unit increase in procurement procedures would lead to increase in the implementation of electricity power expansion projects in Kenya Power by a factor of 0.697.

From the data in Table 3, it was established that regression equation was Y = 0.512 + 0.703X₁ + 0.814 X₂ + 0.711 X₃ + 0.697X₄. Therefore, the implementation of electricity power expansion projects in Kenya Power = 0.512 + (0.703 x top management support) + (0.814 x financial resources) + (0.711 x community support) + (0.612 x procurement procedures).

From the results of this study in Table 3, financial resources contributed more (0.814) to the implementation of electricity power expansion projects in Kenya Power. At 5% level of significance, top management support had a p-value of 0.002; financial resources had a p-value of 0.003; community support had a p-value of 0.001; procurement procedures had a p-value of 0.004. Therefore, the most significant factor was community support. The findings of this study corroborates with literature review by Enshassi et al (2009) who found that the construction industry is complex, as it includes large numbers of parties as owners (or clients), contractors, consultants, stakeholders, and regulators. Contractor performance is connected to several defining factors involving time, money, cost, and labor power.

SUMMARY, CONCLUSION AND RECOMMENDATIONS

The chapter provides the summary of the findings, gives the conclusions and recommendations of the study based on the objectives of the study.

Summary of the Findings
Descriptive research design was used for the study. Census sampling was used to select project managers and stratified random sampling to select the project team members. 33 respondents participated in the study comprising of 3 project managers and 30 project team members. Given below is a summary of the key study findings.

Top Management Support
The study established that a unit increase in top management support would lead to increase in the implementation of electricity power expansion projects in Kenya Power by a factor of 0.703. Majority of the respondents strongly agreed that the top managers effectively communicate the requirements of the project to all the parties concerned. Majority also agreed that on the statement that managers carry out an evaluation of the project progress periodically to check for any deviations. The top management has been involved in defining the requirements of the project, establishing the extent of the work, allocating the resources required, planning the execution of the work, monitoring the progress of the work and adjusting the deviation of from the plan.

Financial Resources
The study revealed that a unit increase in financial resources would lead to increase in the implementation of electricity power expansion projects in Kenya Power by factor of 0.814. Majority of the respondents strongly agreed on the statement that project budgeting is performed at the initial stages of project planning and usually in parallel with the development of the project schedule. Majority of the respondents agreed that financial activities are planned for, recorded, monitored and controlled for effective project implementation. Financial difficulties are the major cause of poor implementation of projects leading to delay in the timely completion of projects. Project implementation was influenced by several factors key among them the availability of financial resources to see the project implementation to the
end. Insufficiency of resources reduced timely implementation of electricity power expansion projects in Kenya Power

Community Support
The study found that a unit increase in community support would lead to increase in the implementation of electricity power expansion projects in Kenya Power by a factor of 0.711. Majority of the respondents strongly agreed on community awareness on the importance of providing wayleave. Majority also agreed on setting up a rural electrification committee to represent the local community. The organization involves all the consumers so as to have a public hearing, extension of new short schemes especially with funding from community contributions. However, communities do not participate much in network and equipment protection against vandalism. The organization also create awareness about productive use of electricity, electricity safety, by committing to all meetings related electricity matters and by creating awareness against vandalizing power line materials.

Procurement Procedures
The study revealed that a unit increase in procurement procedures would lead to increase in the implementation of electricity power expansion projects in Kenya Power by a factor of 0.697. Majority of the respondents strongly agreed that to get a competent contractor, the organization selects contractors based on expertise and reliability. Also majority agreed that need analysis are done before contracting. Project identification starts from an understanding of the Kenya Power mandate and objectives. It involves identifying environmental problems to be addressed and the needs and interests of possible beneficiaries and stakeholders. The company requires contractor registration prior to bidding and also select potential contractors based on experience and reputation. Contractor proposals are always evaluated and a decision is made based on either a cost or best value basis. Contractor performance is then monitored and managed in view of predetermined service goals of the project. SLAs are put in place detailing process maps, responsibilities and implementation of key performance indicators. Structures and reporting lines are defined and implemented.

Conclusion
The study concluded that top management affects the implementation of electricity power expansion projects in Kenya Power. It also concluded that top managers in Kenya Power effectively communicate the requirements of the project to all the parties concerned and carries out an evaluation of the project progress periodically to check for any deviations. They are also involved in defining the requirements of the project, establishing the extent of the work, allocating the resources required and carrying out the evaluation of all the project activities.

The study concluded that financial resources affect the implementation of electricity power expansion projects in Kenya Power. Project budgeting is performed at the initial stages of project planning and usually in parallel with the development of the project schedule. Financial difficulties are the major cause of poor implementation of projects leading to delay in the timely completion of the expansion of projects in Kenya Power.

The study concluded that community support affects the implementation of electricity power expansion projects in Kenya Power. Community awareness is done on the importance of providing wayleave. The setting up a rural electrification committee is done to represent the local community and Kenya Power involves all the consumers so as to have a public hearing and extension of new short schemes especially with funding from community contributions.
The study concluded that procurement procedures affect the implementation of electricity power expansion projects in Kenya Power. Kenya Power selects contractors based on expertise and reliability so as to ensure that they get a competent contractor. The need analysis is done before contracting. Project identification starts from an understanding of the Kenya Power mandate and objectives. The company requires contractor registration prior to bidding and also selects potential contractors based on experience and reputation. Contractor proposals are always evaluated and a decision is made based on either a cost or best value basis and SLAs of the company are not ambiguous and incoherent for contracting.

**Recommendation**

**Top management support,**
This study recommends that Kenya Power should ensure that all the stakeholders are involved during project planning and motivate employees based on the performance. This emanates from the fact the majority of the respondents disagreed that all the employees are involved in project planning and that the top managers ensures that all the employees are rewarded based on their performance.

**Financial resources,**
This study recommends that Kenya Power should set objectives, assess assets, resources, and estimate future financial needs and making plan to achieve monetary goals and also the financial activities should be planned for, recorded, monitored and controlled for effective project implementation.

**Community support,**
This study recommends that Kenya Power should continue encouraging potential consumers to connect to power and set up a rural electrification committee to represent the local community. This will enable the organization to positively and significantly improve on the implementation of the expansion of their electricity projects.

**Procurement procedures,**
This study recommends that Kenya Power should carry out a rigorous analysis during contractor selection to identify the best contractor. Do statements of needs before contracting and also seek for contractor credibility first before the organization enters into contract with the contractor for effective implementation of the expansion of their electricity projects.

**Suggestion for Further Studies**
Based on the findings, this study suggests that further studies should be carried out on the influence of organizational characteristics on the performance of electricity projects in Kenya Power.
REFERENCES


