

INFLUENCE OF PROCUREMENT PROCESSES ON PERFORMANCE OF CAPITAL PROJECTS IN ENERGY-BASED STATE CORPORATIONS IN KENYA

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ABSTRACT

This study aims at establishing the influence of procurement processes on performance of capital projects in energy-based state corporations in Kenya. The research design used in this study was a descriptive survey. Managers and workers at Kenyan state businesses dealing with energy were the focus of this research. Where a sample size of 191 was selected at random from a pool of 368 using a proportional stratified sampling technique. The main data was gathered via the use of self-administered questionnaires. The data was also analyzed with the use of SPSS 21.0, the Statistical Package for the Social Sciences. Descriptive and inferential statistics were also used to examine the data. Quantitative variables were evaluated using descriptive statistics including frequency, percentage, mean score, and standard deviation. The relationship between the dependent and independent variable was assessed via the use of a multiple regression analysis. The data that was analyzed was given in tabular form. The research findings indicate a robust and statistically significant correlation between procurement processes and performance of capital projects in energy-based state corporations in Kenya. This is evidenced by the beta coefficient value of 0.592 and have p-values less than 0.05. These results suggest that improvements in procurement processes have a positive impact on the performance of capital projects in energy-based state corporations in Kenya. Based on the findings of this study, it is advisable for energy-based state corporations in Kenya to enhance the performance and completion rate of their capital projects. This can be achieved by allocating their financial, technical, and human resources towards improving efficiencies in the procurement processes.

Key words; **Procurement processes, performance of capital projects and strategic leadership.**

INTRODUCTION

Across the world, developing nations rely heavily on capital projects to boost their economies (UNDP, 2016). Capital projects are classified into several classifications that are markedly different: They are: housing, non-residential buildings, highways, and industries. Capital projects undertaken by state corporations include constructing new projects, renovating them, and demolishing of buildings. Construction of roads, highways, streets, bridges, tunnels, and overpasses are all examples of public works projects (UN-Habitat, 2017). Time, budget, a defined scope, and requisite quality specifications that have been assigned for the project are the factors that measure its success and performance. For the capital projects to be successful they are backed up by effective project management skills. The business goals and project outcomes are linked through strategic competency which results to project management. Management of projects by the government involves ensuring that project goes in line with the budgeted resources time, cost, scope, quality, and reliable performance (ISO, 2016).

Management of capital projects has a critical impact in ensuring that the project stakeholders, that is, the client, contractor or developer, the consultants and the service providers meet their contractual obligations; minimizing the negative implications that may arise due to cost overruns, time delays, sub-standard quality, dissatisfied client and changes in scope of works (Sauser, Reilly and Shenhar, 2016). The capital projects are governed by various output aspects and the effectiveness is ensured by several stakeholders. The factors that may influence performance of capital projects include approval processes, procurement processes and quality specification standards, variations in the project scope, Worker protection laws, business coalitions, and state economic strategies. Donor organizations, user groups, design consultants, contractors, suppliers, and government agencies are just some of the many parties involved in this initiative (Kerzner, 2016).

Most African state enterprises adhere to a project life cycle procedure throughout the project's initiation, development, and completion phases. Specific tasks and activities, as well as the people who will be doing them and those who will be responsible for approving and evaluating them, are all mapped out in the life cycle process (Dirv and Lechler, 2017). Capital projects are heavily influenced by the stages of project management, which include the following: project initiation and planning, project execution, monitoring, and project control. Time, money, scope, quality, hazards, and resources all play a role, and they are all competing restrictions. Resources in several East Africa's state corporations are being deployed to ensure development of new products, improvement of the process and designing of new services (PwC, 2017). Both the economic factors and poor scope management are the major factors that lead to the failure of capital projects especially in the developing countries (KIPPRA, 2018).

Due to the rapid changes in technology and environmental consciousness, the state corporations

in Kenya had faced challenges because of elevated expectations to achieve their desired performance in capital projects (KNBS, 2018). Energy based state corporations have been one of the major contributors to the economy through provision of socio-economic infrastructure such as homes, hospitals and schools which have also increase job opportunities to the people of Kenya. However, numerous issues have been encountered in the latter stages of the lifespan of capital projects due to risks that were not well handled in the beginning. Change or lack of consideration of project success factors and the project environment are the primary obstacles to its completion (Muyia, 2018). Research of the elements that affect the success of capital projects in Kenya's energy-based state enterprises is warranted.

Parastatals play a significant role in the national economy by facilitating service provision and generating revenue for the state (GoK, 2014). According to the 16th Presidential Taskforce on Parastatal Reforms (2013), parastatals fulfil many functions, such as engaging in manufacturing and commercial activities, among others, Financial intermediation and infrastructure development play crucial roles in facilitating economic growth and regional development via the provision of essential services, The three key areas of focus are environmental protection, education and training, and control of the economy. In the past, government-owned businesses had monopoly or near-monopoly power. Despite cuts in government financing and the privatization of parastatals, globalization of economies loosened trade barriers and markets.

Parastatals have encountered a multitude of obstacles and encountered fierce competition from the private sector after the deregulation of many sectors and industries within which they function. This liberalization has resulted in an expanded range of goods and services, reduced prices, increased employment opportunities with higher remuneration, enhanced healthcare provisions, and elevated overall living standards (Kimani, 2017). The liberalization of the energy sector in Kenya occurred with the implementation of the Energy Sector Policy Framework Papers in 1996 and the subsequent changes introduced by Kenya's Electric Power Act in 1997. The reforms implemented were designed with the objective of promoting competition, enticing private investments, and enhancing operational efficiency within the sector (The Presidential Taskforce on Parastatal changes, 2013). This implies that the accountability of parastatal management to the public and their susceptibility to market forces have increased, in contrast to the previous practice of relying on government funds to rescue them during financial difficulties. Therefore, parastatals have been actively seeking out projects that they can both administer and profit from to improve management and fiscal responsibility. Therefore, the funds will be useful to the government and the parastatal. Thus, governments want their public institutions to provide high-quality services while being cost-effective in the face of stringent rules and intense global competition in the political, economic, social, and technical spheres.

Kenya's capital projects industry has grown rapidly in recent years, particularly in the fields of transportation and energy infrastructure and residential construction. The government's Vision 2030 and the more recent 'Big Four Agenda' have fuelled this development. A successful project is one that is completed on schedule, within budget, and to the required quality standards. Risks in project funding, cost overruns, delays in project completion, project faults, and accountability

of procurement plague Kenya's capital projects from the planning to the execution phases. The failures are due to ineffective management of the project success factors that include the approval processes, procurement processes, application of project standards and variations in scope.

The Kenyan Government has undertaken measures that requires investors support in terms of formulating and implementing strategies for developing capital projects in state corporations by focusing on research, training, review, and industry support. However, the results have not been forthcoming as project managers and investors have neither the capacity nor the resources to undertake many of the project functions and responsibilities. According to a report published by PricewaterhouseCoopers (2017), the major causes of cost and time risks and overruns in projects undertaken by state corporations in Kenya during the implementation period are variations in scope, schedule, and budget.

Various researchers, including Muyia (2018) concede that state corporations projects have been difficult to achieve among practitioners and researchers, due to the complexity of factors. Empirical literature (Gwaya, Munguti and Wanyona, 2018; Kerzner, 2016 and Divr and Lechler, 2017) suggests that the financial challenges emerge as the top barrier to capital projects adopted by state corporations. Belassi and Tukel (2016) and Alexandrova (2015) looked at how infrastructural factors influenced state corporations' projects but majorly focused on western countries. This study therefore seeks to cover the gap left by the scanty studies done to establish the project contractual processes and performance of capital projects in energy-based state corporations in Kenya.

Theoretical Review

The theory for this research was offered by House and Baetz (1979). Leaders with a strategic mindset may continually invent new justifications for their company to remain. Strategic leaders, as described by Kirmi and Minja (2010), are responsible for shaping the development of strategic intent and strategic purpose, as well as influencing the formulation and execution of strategies that result in above-average strategic competitive returns. Several academics, including Bradley and Barrick (2008), have noted a growing interest in the field of strategic leadership. The extensive discussion of strategic leadership by Finkelstein, Hambrick, and Cannella (2009) piqued this audience's attention. The literature makes it clear that businesses have predetermined objectives. A leader's power lies in his or her capacity to persuade followers to make meaningful contributions to the organization's pursuit of defined goals and objectives.

Many strategic organizational leaders, according to Hitt, Haynes, and Serpa (2010), have been ineffective in the face of environmental volatility. It has been noticed that a lack of strategic leadership is the primary cause of an organization's failure. The failure of an organization's leadership to persuade its workers and, by extension, its customers, to buy into the company's vision is a common cause of failure, as noted by Kirmi and Minja (2010). Research shows that when businesses are led strategically, they have a clear purpose and set of goals. Give examples

of how strategic leadership has enhanced the performance of organizations.

Kirimi and Minja (2010) agree with this view, noting the significance of strategic leadership to any given business. It is important to remember that strategic leadership is what helps a business succeed. In a similar vein, Serfontein (2010) suggested that a strategic leader's main objective is to learn as much as possible about the state of the company, its surroundings, and potential threats. Strategic leadership, according to Ahmed (2013), involves both management and leadership roles, with the result that teams tackle strategic challenges as equal partners. Gill (2011) argues that to ensure their strategies are focused, relevant, and legitimate, strategic leaders must be capable of developing the organization's vision, purpose, strategies, and culture, as well as monitoring progress and changes in the environment. This theory is pertinent to the research at hand because it sheds light on the ways in which the performance of capital projects in Kenyan state enterprises focused on the energy sector is affected by the approval and procurement procedures involved.

Empirical Review

The complexity of a procurement process depends on the nature of the goods or services being purchased (Testa, Iraldo, & Frey, 2014). In the capital projects like the ones undertaken by energy sector companies; procurement processes should be followed to the core with exception of simple processes such as: the case of micro procurement of some items in which stages may not have to be followed to the letter. There are also unique circumstances where complex procurements obtain special waivers from the regulatory authorities necessitating non-compliance to stipulated procurement procedures (Kerzner, 2016).

Consideration of pre-qualification or its absence might also characterize the procurement process (Sausser, Reilly, & Shenhar, 2016). Understanding the procurement cycle is crucial for ensuring that all an organization's major players carry out their duties in accordance with the various public procurement and public assets disposal frameworks established by different nations. An overview of how a government agency acquires products, services, and works is provided by the Procurement process used by energy-based enterprises. A brand-new framework of laws and institutions governs the operation (Mok, Shen, & Yang, 2015).

The procurement process in state companies consists of many steps that result in the development of a procurement plan. This plan serves as a guiding document for the corporation's purchase of goods, services, and works for a certain fiscal year, based on the project being conducted (Frumkin, Frank, & Jackson, 2014). The procurement plan encompasses valuable information, such as the procurement method for individual or grouped requirements, the overall duration of the procurement process (lead time), the anticipated dates when each requirement will be needed by the user, the latest date for the user to initiate each procurement, and the financial year in which the procurement will be initiated and payment will be made. The procurement plan, as outlined by Divr and Lechler (2017), may be designed for individual user departments or as a unified procurement plan. This plan serves as the primary outcome of the procurement planning process. Therefore, all three aspects of accountability should be considered in the public procurement

process, although the focus is often on financial accountability, as noted by Odeyinka and Yusuf (2016). Thomas and Greg (2012) argue that state enterprises should adhere to the procurement process based on responsible stages and meticulous procurement planning exercise. Meanwhile, several African nations have, since the 1980s (Meacham, Bowen, Traw, & Moore, 2015), implemented policies that decentralize government along with development planning and administration. A new legislative framework governs the acquisition and disposal operations of corporations at present. There are two types of such laws: domestic and international. Procurement is governed by both internal and exterior rules; the former apply only inside a country's borders, while the latter apply internationally (Babatunde, Perera, Zhou, & Udejaja, 2016).

According to Muyia (2018), the Public Procurement and Disposal Act of 2005 is responsible for establishing protocols that facilitate effective public procurement and the appropriate disposal of unserviceable, outdated, or excess stock, assets, and equipment by public bodies. This legislation also addresses several other topics relating to these processes. The primary goals of the Act are to optimize economic and operational efficiency, foster competition and equitable treatment of competitors, uphold the principles of integrity and fairness in procurement procedures, enhance transparency and accountability in said procedures, rebuild public trust in the procurement process, and facilitate the advancement of local industries and economic growth (Odeyinka & Yusuf, 2016).

RESEARCH METHODOLOGY

The purpose of this study was accomplished using a descriptive survey research methodology. Project managers and staff members employed by Kenyan state businesses with an energy-based business made up the target group for this research. A sample size of 191 was ascertained from the total number of 378 respondents with a level of 95% certainty and a 0.05 blunder. The stratified proportionate arbitrary inspecting method was used in choosing of the study's respondents. The main data was gathered using well-structured questionnaires. The respondents were given the surveys to complete themselves using a drop-and-pick method. Since the questionnaire will ask the questions in a consistent manner, the replies should be compatible. The core data was collected using a series of structured questions that were included in a letter sent out by both UoN and NACOSTI. A pilot study was undertaken to make sure that the instrument items in the data collecting instrument, the questionnaire, are precise and clear. This pilot study evaluated the instrument's precision and clarity as well as the length of time needed to administer it. The reliability and validity tests were then carried out on the randomly chosen respondents who had participated in the pilot research but were left out of the main study sample. For each of the four distinct goals, we employed the universally valid Likert scale questions to collect our data. Expert input was sought throughout its development to assure the study's content validity. To guarantee that the items in each research variable are adequate and reflective of the study's aims and goals, the instruments were developed and operationalized in accordance with those variables. Additionally, supervisory and practical expertise was consulted to confirm the content authenticity.

Each research variable's items were established and operationalized in line with the study's objectives and goals to ensure accuracy and reliability. The material was verified via the use of both theoretical and practical knowledge from supervisors and experts.

For this study, it is adequate if the produced composite unshakable quality co-effective (Cronbach alpha) is 0.7 or above for each of the constructs (Cronbach, 1951). Cronbach's alpha was used to determine the reliability coefficient of the study's survey using the following formula:

$$A = k/k-1 \times [1 - \sum (S^2) / \sum S^2 \text{sum}]$$

Where:

α = Cronbach's alpha

k = Number of responses

$\sum (S^2)$ = Variance of individual items summed up

$\sum S^2 \text{sum}$ = Variance of summed up scores

The alpha level was determined using a one-way analysis of variance. The research revealed an alpha coefficient of 0.876 between the 10 items. Their dependability levels were over the required 0.7, therefore it was trustworthy. The results are detailed below: In this study, ethical issues were highly considered and maintained where the privacy, confidentiality, data protection, voluntary participation, and informed consent by participants in data collection was upheld. Initially, a thorough verification process was conducted to ensure the accuracy of the information collected from the respondents. The whole of the surveys that were returned were thoroughly examined, classified, and tallied to guarantee precision. The survey included a combination of open-ended and closed-ended inquiries.

Results

The second goal was to examine how procurement procedures affect the success of Kenya's state-owned energy companies' capital projects. How the process will be undertaken, time taken and fairness of the same will be evaluated to confirm the effectiveness the project. Table 4.1 shows that the aspects of procurement process were considered to ensure performance of capital projects in state corporations in Kenya as shown by an average score of 3.85.

Table 1 Procurement Process

	Mean	Std. Deviation
Total time the procurement process will take (lead time)	4.09	.628
Fiscal year of payment of the procurement	3.99	.661
International laws	3.67	1.761
Internal laws	3.81	.727
Fairness of the procedures	3.72	.808
Public confidence in the procurement process	3.85	1.794
Total	23.13	6.379
Average	3.85	1.063

Total time the procurement process will take (lead time) (mean=4.09), financial year of payment of the procurement, public confidence in the procurement process (mean=3.85), internal laws (mean=3.81), fairness of the procedures (mean=3.72) and international laws (mean=3.67) were considered to ensure performance of capital projects in state corporations in Kenya to a great extent. The tabulation shows that time taken as well as the fiscal year where the project falls are key in ensuring the projects' set timelines are ensured.

Aspects of the procurement process were considered to guarantee the success of capital projects in Kenyan state businesses, according to the study's conclusions. Lead time, the fiscal year in which the procurement will be paid for, public trust in the process, internal laws, procedural fairness, and international laws were all considered to guarantee the successful completion of capital projects by state corporations in Kenya. Additionally, a favourable and statistically significant correlation was found between procurement procedures and the success of capital projects at Kenyan state businesses focused on the energy sector.

A multiple regression analysis was performed to analyse the influence of procurement processes on performance of capital projects in energy-based state corporations in Kenya. The results were as summarized below.

Table 2: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.825 ^a	.681	.672	.6484

Predictors: (Constant) procurement processes

The model summary includes the coefficient of determination, denoted as R square, which provides insight into the extent to which changes in the independent variables account for the variation seen in the dependent variable. The R-squared value, as indicated in table 2, was 0.681, indicating that 68.1% of the variation in the dependent variable (performance of capital projects) can be attributed to variations in the four independent variables (procurement processes). Therefore, it can be concluded that a sizeable portion, namely 31.9%, of the variability seen in the performance of capital projects within energy-based state companies in Kenya cannot be accounted for by the parameters included in the model or examined in the present research.

Table 3: ANOVA (Analysis of Variance)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	123.973	1	30.99325	72.12	.0000 ^a
	Residual	58.018	138	0.42976		
	Total	181.991	139			

a. Predictors: (Constant) procurement processes.

b. Dependent Variable: Performance of capital projects

The Analysis of Variance (ANOVA) procedure involves doing computations to assess the degrees of variability present within a regression model, so establishing a foundation for conducting tests to determine the significance of the model. The "F" column presents a statistical measure used to assess the hypothesis that all β values are not equal to zero, as opposed to the null hypothesis that β is equal to zero. Based on the results shown in table 3, the obtained significance value was 0.0000, indicating statistical significance at a level lower than the predetermined significance threshold of 0.05. This statement suggests that the regression model used in the study demonstrated statistical significance in predicting the impact of procurement processes on the performance of capital projects within energy-based state businesses in Kenya. Moreover, the critical value of F at a significance level of 5% was determined to be 72.12. The F computed value of 72.12 exceeded the F critical threshold of 2.44, providing further evidence that the overall model was deemed to be suitable.

Table 4: Regression coefficients results

	Unstandardized Coefficients		Standardize d Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	4.608	0.982		4.692	0.000
Procurement processes [X ₂]	0.592	0.189	0.546	3.132	0.003

Based on the regression results shown in the table, the regression model became.

$$Y = 4.608 + 0.592 X_2 + \epsilon$$

From the regression equation above, taking all the predictor variables (procurement processes) constant at zero, performance of capital projects in energy-based state corporations in Kenya would be 4.608.

Table 4 also shows that there is a positive and statistically significant relationship between procurement processes and performance of capital projects in energy-based state corporations in Kenya, a unit increase in procurement processes resulted in a 0.592 rise in performance of capital projects in energy-based state businesses in Kenya, The p-value for the variable was less than 0.05. This indicated that improvements in procurement processes significantly predicted performance of capital projects in energy-based state corporations in Kenya.

Conclusion and Recommendation

The procurement process was considered to ensure performance of capital projects in state corporations in Kenya to a great extent. In the capital projects, procurement processes should be followed to the core with exception of simple processes such as: the case of micro procurement of some items in which stages may not have to be followed to the letter. There are also unique circumstances where complex procurements obtain special waivers from the regulatory authorities necessitating non-compliance to stipulated procurement procedures.

A set of standards for planning a project effectively should outline how the project will be managed, provide a comprehensive outline detailing the sequential process of defining project management standards, streamlining project reporting, and including essential documentation. Standards for project planning should be able to both describe broad categories of project work and cater to the unique needs of each project. All members of the team should be able to recognize the project's goals and see how their work contributes to achieving them, therefore specificity is essential in the project standards. Timely and effective project completion is predicated on having well-defined goals. All relevant stakeholders should have input on the project standards and requirements as much as feasible.

REFERENCES

- Babatunde, S. O., Perera, S., Zhou, L., & Udejaja, C. (2016). Stakeholder perceptions on critical success factors for public-private partnership projects in Nigeria. *Built Environment Project and Asset Management*, 6(1), 74-91.
- Belassi, W., & Tukel, O. I. (2016). A new framework for determining critical success/failure factors in projects. *International Journal of project management*, 14(3), 141-151.
- Divr, D., & Lechler, T. (2017). Plans are nothing, changing plans is everything: the impact of changes on project success. *Research Policy*, 33(1), 1-15.
- Gwaya, A., Munguti, S., & Wanyona, G. (2018). A Critical Analysis of Project Management Failures. *International Journal of Soft Computing and Engineering*. 4(1) 13-23.
- International Standards Organization. (2016). *Home: ISO*. Retrieved March 22, 2019, from International Standards Organization: www.iso.org
- Kimani, J. W. (2017). Factors affecting the implementation of enterprise resource planning in state corporations: A case study of Nairobi City Water and Sewerage Company. *Interdisciplinary Journal of Contemporary Research In Business*, 5, 23-55.
- KIPPRA. (2018). Kenya Economic Report 2018: Creating an enabling environment for stimulating investment for competitive and sustainable Counties.
- Mok, K. Y., Shen, G. Q., & Yang, J. (2015). Stakeholder management studies in mega construction projects: A review and future directions. *International Journal of Project Management*, 33(2), 446-457.
- Muyia, E. (2018). Change Management and Organizational Transformation at Telkom Kenya Limited. University. Nairobi: Unpublished Research
- PwC. (2017). Trends, Challenges and Future Outlook: Capital projects and infrastructure in East Africa, Southern Africa, and West Africa. PWC. Retrieved April 23, 2019, from www.pwc.co.za
- Sauser, B. J., Reilly, R. R., & Shenhar, A. J. (2016). Why projects fail? How contingency theory can provide new insights-A comparative analysis of NASA's Mars Climate Orbiter Loss. *International Journal of Project Management*, 27, 665-679.
- UNDP, (2016). Human Development Report, 2016.
- UN-Habitat. (2017). Urbanization and Development: Emerging Futures. Nairobi: UN-Habitat.

