CRITICAL SUCCESS FACTORS INFLUENCING THE DESIGN OF PUBLIC PRIVATE PARTNERSHIP PROJECTS: CASE OF LAMU PORT SOUTH-SUDAN ETHIOPIA TRANSPORT (LAPSSET) CORRIDOR PROJECT

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2014
DECLARATION

I hereby declare that this project report is my original work and has not been presented for a degree at any other university.

Signature………………………………                Date…………………….

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REG. NO. L50/61387/2013

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

Signature………………………………                Date…………………….

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DEDICATION

This research project is dedicated to my beloved husband Stephen Kilonzo and my lovely children, Bliss and Cecil.
ACKNOWLEDGEMENTS

Recognition goes to various people who attributed to the successful completion of this research project and to God for his grace and favor. I am humbled to take this opportunity to thank each one of them.

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ABSTRACT

The purpose of this study was to evaluate the critical success factors (CFSs) influencing the design of Public Private Partnership Projects in Kenya, focusing on the LAPSSET corridor project. The Study addressed the four CSFs; positive environmental influence, financial capabilities, a strong consortium and developed legal framework. The study employed the descriptive research method and included both quantitative and qualitative analysis techniques. Data was collected through questionnaires and statistically analyzed using the SPSS. The findings of the study indicated that the selected CSFs were very important to the design of the LAPSSET corridor project though in differing extents. The positive environmental impact was ranked as the most CSF, followed by a strong consortium, then the financial capabilities of partners, all ranked as very great influence and finally the developed legal framework ranked as great influence. The recommendations offered focused on the need to provide information to all stakeholders, improvement on the financial capability evaluation criteria, conducting regular environmental impact assessments, regular reevaluation of the partners’ strength and weakness and improving the Kenyan legal framework.
CHAPTER ONE:
INTRODUCTION

1.1 Background to the Study

The author concurs with Cheung & Chan (2011) who noted, new procurement paradigms are emerging to challenge and replace the traditional methods of procurement of public projects. These new methods are increasingly emerging as a popular choice for policymakers in the design and implementing important public works projects especially in the face of a shortage of government financial resources in developing economies and where it is necessary to counter public inefficiency (Alfen, Kalidindi, Ogunlana, Wang, Abednego, Jungbecker, Jan, Ke, Liu, Singh, & Zhao, 2009). There exist three extensive options of such organizational forms in the provision of infrastructure development: such as Public Sector Provision (PSP), Public Private Partnerships (PPPs) and privatization. Each of these forms includes a number of contractual arrangements, with many measures, structured with the intention of increasing private participation.

The recent successes of one of these methods, the Public Private Partnerships (PPPs) model in the United Kingdom, Hong Kong, Singapore, Australia, Malaysia and other countries, and the fact that the PPP has become increasingly common in developing economies, has caught the attention of academic researchers worldwide (European Investment Bank, 2005). It was developed with a view of curbing the criticisms of traditional public procurement methods that are known and documented in literature and research, such as lack of single point responsibility, tendency to adversarial relationships, lack of utilization of construction knowledge, backwardness in innovativeness, among others (Cartlidge, 2007).

The Public Private Partnership (PPP) can be defined as a risk sharing investments in the provision of public goods and services, seen by governments as a means to launch investment programs, which would not have been possible within the available public-sector budget, within reasonable time (European Investment Bank, 2005). PPPs enable governments that are already stretched for resources with the present economic climate, to utilize alternative private sector
sources of finance while simultaneously gaining the benefits that the private sector can bring in terms of skills and management. (Tang, Qiping & Eddie, 2009).

The use of PPPs to substitute and harmonize the Public Sector Provision (PSP) of infrastructure has become common in recent years. In the modern era of infrastructure development, projects that require complex, innovative, and large upfront investments, such as the financing and construction of roads, bridges, seaports, airports terminals, sewage and renewal energy facilities, light and speed rails, highways, schools and hospitals are now frequently provided through the means of PPPs (Tang et al, 2009).

According to European Investment Bank (2005), PPPs have been well practiced and documented in many developed economies in Europe, America and Australia for delivering construction and building projects. The success and advantages of adopting PPP in these places have been well documented. However, not all of these PPP projects have been equally successful. For countries that are new at adopting PPP it is becoming more important for them to identify the Critical Success Factors (CSFs) during the project design stages in order to maximize the advantages of this method and to reduce the risks for all concerned parties.

The CSFs are those few areas of activities in which favorable results are absolutely necessary for managers to achieve their goals (Rockart, 1982). A comprehensive review of contemporary literature by the researcher, that included research reports, journal articles, conference papers and internet materials identified and reviewed fifteen key CSFs of PPPs. These are; Compatibility/complimentary skills among the key parties; Technical innovation in overcoming project complexity; Efficient approval process; Positive environmental impact; Developed legal/economic framework; Political stability; Selecting the right project; Existing strategic alliances; Good resource management; Trust among key parties; Community support; Appropriate feasibility study; Transfer of technology; Financial capability; and Consortium structure among others. For the purpose of this study, the researcher further analyzed and identified the top CFSs identified by infrastructure driven studies as follows: financial capabilities of all partners, positive environmental impact of the projects, developed legal framework, a strong consortium and proper procurement processes.
According to World Bank (2013) PPPs in Africa began only in the mid- to late-1990s. They have been used mainly to make improvements to economic (physical) infrastructure, such as Transport, telecommunications, electricity and water. Traditionally, these services have been provided by the public sector mainly because most of them require large capital outlays, and have a long gestation period. Between 1990 and 1998, Africa accounted for about US$14 billion of the total investment of US$496 billion made in PPP projects in developing countries (World Bank, 2013). This compared unfavorably with US$237 billion for Latin America and the Caribbean, US$147 billion for East Asia and the Pacific, and US$38 billion for South Asia. The low figure for Africa is thrown into sharper relief given that infrastructure investment requirements in Africa are estimated at between 5-6 percent of GDP, which is equivalent to about US$250 billion over the next ten years (World Bank, 2013).

Given the paucity of public funds, African countries are increasingly depending on private funding for the development of services traditionally provided by the public sector. Estimates suggest that Africa requires infrastructure investment of 5 to 6 percent of GDP per year (Ministry of Finance, 2011). It is estimated that African countries require about US$18 billion in infrastructure financing, or approximately 6 percent of GDP, each year this decade (World Bank, 2013). Neither the public sector nor the multilateral development institutions have the capacity to provide more than a small fraction of this investment. It is therefore noted that if African countries are to get the economic and social infrastructure and other services they need, then the private sector, working in partnership with governments, must play a leading role in bridging the resource gap (Ministry of Finance, 2011).

In Kenya, like in most developing countries, the role of government in the economy is still quite substantial. Whereas total government expenditure as a proportion of GDP at market prices was 22% in 2000/01 financial year, it stood at 34% in 2004/05 and 38% in 2010/2011 (Ministry of Finance, 2013). The pressure to reduce expenditure and cut down taxes has forced the government to resort to the private sector. In the last few years even where adequate competition has not been prevalent and service provision has largely remained monopolistic, e.g. in the telecommunications sector evidence suggests that where private sector bears the risk, it delivers better results than any credible public sector alternative. There is therefore increased demand for quality and affordable services from citizens in transport, water and sewerage,
telecommunications, power and social services which can only be achieved effectively through the PPPs (Ministry of Finance, 2013).

The Kenya Vision 2030 (2008 – 2030) aims to transform Kenya into an industrialized middle income country by 2030 which requires heavy investment in infrastructure services. The Government needs to spend USD 60Billion for infrastructure over the next 8 yrs against available USD 25 Billion (Ministry of Finance, 2011). The current allocations for the financial year 2012/2013 for infrastructure is Ksh 267 Billion (USD 3.2B), which accounts for less than 9% of GDP (Ministry of Finance, 2013). This should increase to15% through private partnerships as lack of adequate infrastructure result in huge costs to the society from lower productivity to reduced competitiveness and ultimately loss of business opportunities. To make services work for the poor people, Kenya must review its service delivery mechanisms and the institutions that provide the service. New management practices and technologies are changing the way programs and services are delivered. Rapid development in information and communications technology has created many opportunities related to service delivery, giving rise to globalization and intensified international competition (Ministry of Finance, 2013).

In response to this, Kenya is providing the right environment by: Provision of Supportive Policy and Legal Environment through Issuing a PPP Policy by Government in December, 2011 and a New PPP Law (2012) developed and currently under debate in Parliament that Places clearly PPP initiative within the reform agenda, establishes a PPP Secretariat at Treasury as well as PPP nodes in Contracting Authorities and adoption and localization of international successful PPP models (Ministry of Finance, 2013). Due to these initiatives and an assurance by the current administration to pursue and implement the PPP law and policy, a number of such infrastructural projects have been commissioned.

One such initiative is the Lamu Port Southern Sudan-Ethiopia Transport (LAPSSET) Corridor project aka The Lamu corridor as a transport and infrastructure project that when complete will be the country's second transport corridor. The project was initially conceived in 1975 but never took off due to various reasons. The project was later revived and included in Kenya's Vision 2030. In 2009, the cost of LAPSSET was estimated at $16 billion. On 1 April 2013, Kenya's government announced the setting up of a government agency, the Lamu Port Southern Sudan
Transport Development Authority that will manage the project on behalf of the Kenyan government. Among the authorities mandate is to seek and coordinate the private-public partnerships (Ministry of Finance, 2013).

1.2 Statement of the problem

Public private partnerships have been recognized as important approaches to solving problems for governments in providing infrastructure systems. Consequently, there has been a strong movement toward involvement of the private sector in the provision of public infrastructure and services across a wide range of industries and sectors, including power, transportation, water supply and disposal, telecommunications, oil and gas, mining, schools, hospitals, and military training facilities in order to alleviate the spending on governments’ budgets (Algarni, Arditi & Polat, 2007). Some of the forces driving this movement have been a scarcity of public resources, a political trend toward the deregulation of infrastructure, and an expansion of global markets. With this movement, the private sector is playing an increasingly crucial role in the finance and provision of services that were traditionally the domain of the public sector therefore easing the financial constraints of governments.

Many PPP projects in developed economies have been largely successful due to strict adherence to PPP rules and agreements. For example, the United Kingdom, Europe, America and other developed economies are regarded as successful, and the Critical Success factors or the drivers of success have become an area of investigation (Li, Akintoye, Edwards, & Hardcastle, 2005). However, less is known about the influence of the critical success factors (CSFs) on the design of PPP projects in developing countries. It should be recognized that little research has been done within the aforementioned geographical area to determine the Critical Success factors of PPPs. Some of the available studies like one by, Alinaitwe (2010), on the Contractors’ Perspective on Critical Factors for Successful Implementation / design of Private Public Partnerships in Construction Projects in Uganda indicated that factors touching on technical, economical and social viability were the most critical factors to address, whereas Dada and Oladokun (2012), analyzed the CSFs for PPPs in Nigeria and the findings suggested that there are significant differences in the perceptions of both the public and private sectors on the rankings of the SSFs on PPP projects in Nigeria. However, the major CSF’s that featured prominently in previous
studies were financial capabilities of all partners, positive environmental impact of the projects, developed legal framework, and a strong consortium.

Despite these prior studies that have investigated the CSFs of PPP projects, studies on CSFs for the design of PPP’s in Kenya remain scarce even though like other developing economies, Kenya faces financing gaps that can be bridged by the PPP’s. Moreover, the unique characteristics of CFS’s in developing economies require a study.

This study therefore sought to evaluate if financial capabilities of all partners, positive environmental impact of the projects, developed legal framework, a strong consortium and efficient procurement processes as a mitigating factor that have been said to influence the design of PPP projects in other countries also influence the design of PPP’s projects in Kenya with a special emphasis on LAPSSET corridor project.

1.3 Purpose of the Study

The purpose of this study was to evaluate the critical success factors influencing the design of Private-Public Partnership projects. The study focused on the case of the Lamu Port Southern Sudan-Ethiopia Transport Corridor (LAPSSET) project.

1.4 Objectives of the Study

The Study was guided by the following objectives:

i. To establish the influence of positive environmental impact on the design of LAPSSET Corridor project.

ii. To examine the influence of financial capability of partners on the design of LAPSSET Corridor project.

iii. To determine the extent to which a strong consortium influences the design of LAPSSET Corridor project.

iv. To assess the influence of Developed legal framework in the design of LAPSSET Corridor project.

1.5 Research Questions

The study was able to answer the following research questions:
i. How do positive environmental impacts influence the design of LAPSSET Corridor project?

ii. How does financial capability of partners influence the design of LAPSSET Corridor project?

iii. To what extent does a strong consortium influence the design of LAPSSET Corridor project?

iv. What is the influence of Developed legal framework in the design of LAPSSET Corridor project?

1.6 Research Hypothesis

This study was able to test the following hypothesis:

Hypothesis 1:

\[ H_1 \mu \]

#Positive environmental impact does influence the design of the LAPSSET corridor project.

Hypothesis 2:

\[ H_2 \mu \]

#Financial Capabilities of partners does influence the design of the LAPSSET corridor project.

Hypothesis 3:

\[ H_3 \mu \]

#A strong Consortium does influence the design of the LAPSSET corridor project.

Hypothesis 4:

\[ H_4 \mu \]

#Developed legal framework does influence the design of the LAPSSET corridor project.
1.7 Significance of the Study

This study sought to address critical success factors influencing the design of Private-Public Partnership projects and will focus on the case of the LAPSSET corridor. It will therefore be of great significance to the following:

The study will be invaluable to the Government and private partners of LAPSSET corridor project team in getting a comprehensive knowledge on the influence of the top critical success factors of PPPs in the project design

The policy makers and government will obtain knowledge of the CSF of PPPs design. The study provides guidance in designing appropriate innovative strategies policies that will enhance success of the PPPs hence ensure survival and growth of the economy.

The study provides information to the various scholars in Kenya; this will expand their knowledge on CSFs of PPPs and hence identify areas of further Research.

1.8 Delimitations of the Study

The study evaluated the knowledge and attitude of the LAPSSET project stakeholders by selecting and studying a selected sample in order to determine the measure and the way of distributing the variables. LAPSSET corridor is one of the many PPPs currently designed and about to be implemented by the government. This study sought to describe the perceptions of the respondents, and estimate the proportions with certain characteristics and made predictions for the purpose of this study.

1.9 Limitations of the Study

The present study has a number of limitations. One is that the research focused on public institutions that are said to limit information sharing to the public. Access to these organizations and relevant respondents was gained via the researcher’s personal networks; the findings of the study may therefore have some limitations.

All findings were based on the information provided by the respondents, and are subject to the potential bias and prejudice of the people involved.
The extent to which the objectives of the study could be reached was affected by time limitations.

1.10 Assumptions of the Study

This study was built on the basic assumption;

That the respondents would be truthful in responding to the questions.

1.11 Definition of Significant Terms

This will define the key significant terms that will be used in the study.

**Consortium:** an agreement, combination, or group (as of companies) formed to undertake an enterprise beyond the resources of any one member

**Legal framework**

This refers to the laws and policies, or set of rules, procedural Steps often established through precedent in the common law through which judgment can be made.

**Public Procurement**

Procurement means acquisition by purchase, rental, lease, hire Purchase, license, tenancy, franchise or any type of works, services Or supplies or any combination up to the time a user consumes or Utilizes a service as per his requirement and in line with the Procurement Act and regulations of the country.

1.12 Organization of the study

The research project report is organized in five chapters excluding the preliminary pages. Chapter one represents a brief introduction to the research topic. It introduces the concept of PPPs, CSFs and a background to the LAPSSET corridor project as the focus of the study. This chapter also outlines the framework, objectives and flow of the research. It also highlights the research questions, significance and limitations of the study. Chapter two focuses on literature review concerning PPPs and CSFs strategies and policies as a historical overview. The chapter
also brought in the concept and examples of public private partnership with the model of a PPP project. Chapter three discusses the research methodology framework of the research. It introduces the model, which will be used for analyzing the critical success factors of PPPs in Kenya. Chapter four provides data analysis, presentation and interpretation and chapter five outlines summary of findings, discussions, conclusions and recommendations.
CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter reviews literature related to the concepts stated in the research questions. The literature examination pertained to the theoretical review on; an introduction to Public Private Partnerships, the types of PPPs, and the Critical Success Factors. From this, a conceptual framework is formulated to gain more understanding into the subject area.

2.2 Public Infrastructure Procurement

One of the key tasks in infrastructure project delivery is the selection of the procurement method to choose the project. But most of the attention, both in practice and in the literature is devoted to the decision on the structure of the project, the criteria and methodology for selecting between competing projects, the procurement of goods and services for the project (particularly if it is the responsibility of a government agency), the risk allocation between the parties and the financing of the project (Cheung & Chan, 2011). The procurement method for the project is relatively neglected, probably based on the mistaken assumption that the only suitable method is competitive procurement and then it becomes a non issue (Cheung & Chan, 2011).

Unfortunately, traditional public procurement is well known for corruption opportunities (Alfen et al., 2009). This concern has dominated the design of rules and regulations regarding public procurement. These emphasize the principles of selecting projects with economy, efficiency and transparency and fairness. One of the most common ways to achieve this is through competitive procurement and involvement of the private sector. Nevertheless, even when these processes are in place, given the usually large size of the projects and the asymmetry of power between the parties, corruption and collusion are still prevalent (Alfen et al., 2009).

Given the nature of infrastructure projects and the conditions prevailing in developing countries and some areas of developed ones, there may be some reasons to consider alternative procurement methods. Infrastructure projects tend to be relatively large, non-standardized, with relatively long periods of time for their procurement and definitely for their implementation, with
asymmetry of power and of resources between the public agency and the supplier of the project (Cheung & Chan, 2011). Inflexible risk allocation may lead to a situation in which one of the parties go bankrupt, setting the stage for costly legal disputes. And some of the conditions required for effective competitive procurement may not apply everywhere.

New procurement paradigms are emerging to challenge and replace the traditional methods of procurement of public projects (Cheung & Chan, 2011). These new methods are increasingly emerging as a popular choice for policymakers in implementing important public works projects especially in the face of a shortage of government financial resources in developing economies and where it is necessary to counter public inefficiency (Alfen et al., 2009). There exist three extensive options of such organizational forms in the provision of infrastructure development: such as Public Sector Provision (PSP), Public Private Partnerships (PPPs) and privatization. Each of these forms includes a number of contractual arrangements, with many measures, structured with the intention of increasing private participation. This study focuses on the Public Private Partnership (PPP) as the ideal form of effective and efficient provision of infrastructure development.

2.3 Public Private Partnerships (PPPs)

According to Grimsey and Lewis (2002) PPPs can be defined as, agreement where public sector bodies enter into long-term contractual agreements with private sector entities for the construction or management of public sector infrastructure facilities by the private sector entity, or the provision of services (using infrastructure facilities) by the private sector entity to the community on behalf of a public sector entity. Akintoye et al. (2003) define PPPs as a long-term contractual arrangement between a public sector agency and a private sector concern, whereby resources and risk are shared for the purpose of developing a public facility. The principal aim of a PPP for the public sector is to achieve value for money in the services provided while ensuring that the private sector entities meet their contractual obligations properly and efficiently (Grimsey and Lewis, 2002). Public-Private Partnerships could also be defined as the means by which large-scale investment and service provision of infrastructure development are locked into a single long–term contract. A cluster of private investor’s raises capital to finance, invest, maintains and manages the construction of the project, and also operates the facilities for a long period of typically 25 to 30 years and, at the end of the arranged contract date, transfers the
assets to the government or any other nominated by them as it stipulates in the contract agreement. Thus, for the duration of the operation of the project, the private partner receives a flow of payments as reimbursement. These payments cover both the initial investment- Capital expenses and operation and maintenance expenses. All of these depend on the form of development projects and type of infrastructure development, these revenues are acquired not from the tax payers but by user fees and charges such as in a toll highway, or from payment by the government’s procuring bureau.

Peirson and McBride (1996) noted that numerous forms of PPP include some or all of the following features: The public sector entity transfers facilities controlled by it to the private sector entity (with or without payment in return) usually for the term of the arrangement; The private sector entity builds, extends or renovates a facility; The public sector entity specifies the operating features of the facility; Services are provided by the private sector entity using the facility for a defined period of time (usually with restrictions on operations and pricing); and The private sector entity agrees to transfer the facility to the public sector (with or without payment) at the end of the arrangement (Peirson and McBride, 1996).

PPPs are a means of public sector procurement using private sector finance and best practice. PPPs can involve design, construction, financing, operation and maintenance of public infrastructure and facilities, or the operation of services, to meet public needs. They are often privately financed and operated on the basis of revenues received for the delivery of the facility and/or services. One key to this is the ability of the private sector to provide more favorable long term financing options than may be available to a government entity and to secure the financing in a much quicker time frame. According to Mustafa (1999), PPPs address the common faults that are associated with public sector procurement such as high construction costs, construction overruns, operational inefficiencies, poor design, and community dissatisfaction. The PPP is founded on transfer of risk from the public to the private sector under circumstances where the private sector is best placed to manage risk.

One of the key features of the PPP which is appealing to the government is the shift of project risks from the public sector to the consortium involved with the project even though this requires a profit incentive to the project consortium (Grimsey and Lewis, 2002). PPPs are being
established as a cost effective method of overcoming costs associated with the provision and maintenance of infrastructure. PPPs have multiple objectives including promoting infrastructure development, developing local economy, reducing costs, increasing construction and operation efficiencies, and improving service quality by incorporating the private sector’s knowledge, expertise and capital (Yuan et al., 2009).

The growth and spread of PPPs across the world has been less than uniform or unitary in nature as is the case with most of the new public management reforms (Olson et al., 1998,). Yescombe (2007), argue that the growth and spread of PPPs around the world is very much connected to the development of project finance, a financial method based on the lending against the cash stream of a project that is legally and economically self-sufficient. Project investment and finance setups are highly leveraged and lenders receive no guarantees beyond the right to be paid from the cash flows that accrue of the project. Hence, as the assets of the project ventures are specific, the capital investments are not readily convertible in cash and have little or no value if the project eventually fails.

2.4 Critical Success Factors

Critical success factor (CSF) can be defined as an element that is necessary for an organization or project to achieve its mission. It is a critical factor or activity required for ensuring the success of a company or an organization (Zhang, 2005). Russell (2008) also defines Critical success factors as those few things that must go well to ensure success for a manager or an organization, and, therefore, they represent those managerial or enterprise area, that must be given special and continual attention to bring about high performance. CSFs include issues vital to an organization's current operating activities and to its future success.

The concept of "success factors" was developed by D. Ronald Daniel of McKinsey & Company in 1961. The process was refined into critical success factors by John F. Rockart between 1979 and 1981. In 1995, James A. Johnson and Michael Friesen applied it to many sector settings, including infrastructure development healthcare. According to Russell (2008), an understanding of CSFs may assist business executives in improving their processes so as to reduce the cost of project failure. The concept of the CSFs cuts across different fields of human Endeavour where process improvement is desired (Omran, Omran & Kadir, 2010).
The procurement of infrastructure project especially in the construction sector can be done through many routes. Such routes include the traditional method, the integrated methods, management oriented methods and collaborative methods (Morledge and Owen, 1999). These methods are however more of construction industry options. While it is true that PPPs have the underlying philosophy of integration of design and construction in the context of the construction industry, the pervasive effect of the PPP across many sectors and even in the provision of services differentiates it from other procurement paths in the construction industry.

In dealing specifically to construction PPPs, prior literature has assessed the critical success factors (CSFs) in general (Saqib et al., 2008). In general, there are two types of literature on the CSFs of PPP: 1) studies that assess the CSF of PPP projects in general and 2) studies that examine the CSFs of a specific PPP project. This study intends to assess the CSFs of PPP projects on a specific project, the LAPSSET corridor.

In respect of specific case studies, Jefferies et al. (2002) examined the CSFs of a roads project in Australia, which was built using the Build Operate Own Transfer (BOOT) mode of PPP. The authors identified and examined 15 success factors and concluded there were 5 critical success factors relevant to the project. Likewise, Jefferies (2006) investigated the CSFs of the Super Dome PPP project, which was also constructed using the BOOT scheme. The study considered the same critical CSFs examined in Jefferies et al. (2002). According to these two studies it is conclusive that the five (5) top most important success factors for both projects were: environmental impact, financial capabilities, strong consortium, legal framework and the procurement process.

**2.4.1 Environmental Impact and Influence on design of PPP’s projects.**

An environmental impact involves assessment of the possible impacts that a proposed project may have on the environment, consisting of the environmental, social and economic aspects. The purpose is to ensure that decision makers consider the environmental impacts when deciding whether or not to proceed with a project (Zhang, 2005). This involves the process of identifying, predicting, evaluating and mitigating the biophysical, social, and other relevant effects of development proposals prior to major decisions being taken and commitments made (Russel, 2008). This requires decision makers to account for environmental values in their decisions and
to justify those decisions in light of detailed environmental studies and public comments on the potential environmental impacts of the projects.

According to Jefferies et al., (2002) to minimize negative environmental impact it is important to understand the link between various project activities and the potential for these activities to impact on the environment. The environment is defined as living things, their physical, biological and social surroundings and the interactions between all of these. Environmental management measures will depend on the nature of the site activities and the sensitivity of the project area and surrounding land. For example, excavations resulting in steep slopes are likely to lead to soil erosion and water quality problems downstream and will require the installation of erosion protection measures. The environmental impact however, can be reduced by planning activities carefully before commencing work on-site (Jefferies et al., 2002).

2.4.2 Financial Capabilities and Influence on design of PPP’s projects.

Financial capability can be defined as: the motivation to efficiently manage finances and effect change; the day-to-day management of finances, for example, effective budgeting and use of a bank account; planning ahead for successful project completion, other transitions and unexpected events; efficient selection of financial products and the ability to understand these products, for example, by comparing repayment costs before taking a loan and knowing where, and how, to seek appropriate project financial consulting services (Liet al., 2005).

Many researchers have found that project financing is a key factor for private sector investment in public infrastructure projects (Akintoye et al. 2001; Corbett and Smith 2006; Jefferies et al. 2002; Liet al. 2005, Zhang 2005). The availability of an efficient and mature financial market with the benefits of low financing costs and diversified range of financial products would be an incentive for private sector taking up PPP projects.

At a basic level, financially capable Public Private Partners will be able to: understand their project financial forecasts and implications as well as other basic financial records, understand the implications of borrowing money repayment over time, usually with interest, the use cash and non-cash methods of payment, manage project budgets and prioritize essential and non-
essential spending, and understand taxation requirements and implications on project revenues (Liet et al., 2005).

2.4.3 Developed Legal Framework and Influence on design of PPP’s projects.

An independent, fair and efficient legal framework is a key factor to consider in the design of a PPP project. The multiplicity of parties in privately financed projects makes conflict predictable. Yet despite its perceived negative impact, conflict within PPPs can lead to creative and constructive outcomes when it is managed by encouraging open discussion and a strong legal framework that allows full exploration of the participants’ needs, concerns, values, meanings, and interests which are the essential ingredients of authentic communication (Corbett and Smith, 2006). The author posits that, a developed legal framework can contribute significantly to the accountability and transparency in a PPPs environment, because it serves as a mechanism for channeling constructive conflict towards positive outcomes.

Similarly, sufficient legal resources at reasonable costs should be available to deal with the amount of legal structuring and documentation required. A transparent and stable legal framework should help to make the contracts and agreements bankable (Hardcastle, 2005). Therefore this is to say that an adequate dispute resolution system, appropriate governing rules, regulations and reference manuals related to PPP should be well established to facilitate the effective application of PPP procurement approach.

2.4.4 A Strong Consortium and Influence on design of PPP’s projects.

A strong consortium of partners involved in PPP’s is very crucial in the design of the project. Mutual strength is also of utmost importance to ensure that all parties are well informed of their roles and responsibilities and are well equipped to perform them without inconveniencing other members (Jefferies et al., 2002).

The government in contracting out the PPP projects should ensure that the parties in the private sector consortium are sufficiently competent and financially capable of taking up the projects. This suggests that partners should explore other participants' strengths and weaknesses and, where appropriate, join together to form consortiums capable of synergizing and exploiting their
individual strengths. Good relationship among partners is also critical because they all bear relevant risks and benefits from the cooperation (Zhang, 2005)

A strong consortium can be constituted in order for the method to work. For example, projects that require heavy financial investment and management should be awarded to partners that are financially strong company. Apart from financial muscle, the strength of private sector participants lies in the management team they deploy where a capable team should have extensive experience in the projects. The strength of the consortium can also be affected by the relationship of the private with the public sector where the two fundamental attributes for procuring successful infrastructure projects are commitment and mutual trust, which need to come from both the public and private sectors (Hardcastle, 2005).

2.4.5 Efficient Procurement Process and Influence on design of PPP’s projects.

According to Corbett and Smith (2006) an efficient, effective, economic and ethical procurement process is essential in lowering the transaction costs and shortening the time in negotiation and completing the deal. An Efficient process relates to the achievement of the maximum value for the resources used. It includes the selection of a procurement method that is not inconsistent with policies of the government and that is the most appropriate for the procurement activity, given the scale, scope and risk of the procurement (Akintoye et al. 2001).

Effective procurement process relates to the extent to which intended outcomes or results are achieved. It concerns the immediate characteristics, especially price, quality and quantity, and the degree to which these contribute to specified outcomes. This is closely related to the process being economical in terms of minimizing cost. It emphasizes the requirement to avoid waste and sharpens the focus on the level of resources that the government applies to achieve outcomes (Liet et al, 2005).

An Ethical procurement process relates to honesty, integrity, diligence, fairness and consistency. Ethical behavior identifies and manages conflicts of interests, and does not make improper use of an individual’s position. In particular, officials undertaking the procurement process must act ethically throughout the procurement process. Ethical behavior includes: recognizing and dealing with actual, potential and perceived conflicts of interest; dealing with potential suppliers,
tenderers and suppliers equitably, including by; carefully considering the use of government resources; and complying with all directions, including the procurement act in relation to gifts or hospitality, the information privacy principles and the security provisions (Corbett and Smith 2006).

In addition, a clear project brief and client requirements should help to achieve these in the bidding process. In most cases, competitive bidding solely on price may not help to secure a strong private consortium and obtain value for money for the public. The government should therefore take a long-term view in seeking right partners (Zhang, 2005).

2.5 Conceptual Framework

The main objective of this study is to analyze the CSFs influencing the design of PPPs. In this research a conceptual framework is adopted as illustrated below. The dependent variable identified is the four CSFs of Positive environmental impact, financial capabilities, developed legal framework and a strong consortium. The model indicates that, successful design of the projects, acceptability, implementation and sustainability of the project and economic development and growth are the dependent variables. Equally important are the moderating variables which directly or indirectly influence the independent variables. These included an efficient procurement process.
Figure 2.1: Conceptual framework

**Independent variable**

**Critical Success Factors**

- **Positive Environmental influence**
  - Conducting Impact assessment studies
  - Identification of potential environmental adverse effect
  - Link various activities and impact on the environment
  - Provide environmental management measures

- **Financial capabilities**
  - Sound financial analysis capabilities
  - Ability to fully finance project
  - Understanding taxation requirements and implications
  - Ability to deal with fluctuating interest/exchange rates

- **Developed legal framework**
  - Efficient and Effective legal system
  - Binding contractual agreements
  - Encourages accountability and transparency
  - Reasonable legal costs
  - Mitigation of legal disputes

- **Strong Consortium**
  - Strong capable project team
  - Effective project organization structure
  - Sound technical solution to emerging problems
  - Joint risk bearing strategies
  - Rich experience in PPP management

**Moderating variable**

- **Procurement Process**
  - Efficient (Maximum value give scale, scope and risk)
  - Effective (Price, quality and quantity)
  - Ethical (Honesty, integrity, diligence, fairness and consistency)

**Dependent variable**

- **Successful Implementation**
  - Implementation within appropriate time lines
  - Project Sustainability
  - Consumer acceptability
  - Infrastructure development
  - Economic Growth

- **Infrastructure development**

- **Dependent variable**

- **Financial capabilities**

- **Independent variable**

- **Critical Success Factors**

- **Dependent variable**

- **Developed legal framework**

- **Strong Consortium**

- **Moderating variable**

- **Procurement Process**

- **Successful Implementation**
2.6 Summary

2.6 Summary of literature

Chapter Two reviewed extensive literature on the concepts and variables outlined in the research questions and objectives. The chapter started with an introduction to Public Infrastructure procurement and the varying methods used by governments to ensure implementation and completion. The chapter narrowed down to the concept of PPP’s as one of the emerging procurement methods that is being used across the globe to assist economies to fulfill their development goals. The chapter then focused on the CSF’s that are said to inform efficient and effective design and implementation of the PPP’s. The highlighted CSF’s were environmental impact, financial capabilities, developed legal framework and a strong consortium, which are basically the independent variables, with efficient procurement processes as the moderating variable, that is projected to lead to successful project implementation which is the dependent variable. This literature led to the creation of the conceptual framework that will act as a guide to the research methodology.
CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This chapter discussed the following: research design, target population, sample size and sampling procedure, data collection method / procedure, research instruments and data analysis methods.

3.2 Research Design

Research design involves the planning, organization, collection and analysis of data so as to provide answers to questions such as: what techniques will be used to gather data? What sampling strategies and tools will be used? And how will time and cost constraints be dealt with? (Leedy, 1993). The researcher proposed to use the descriptive survey design to gather data relating to CSF of the LAPSSET project. According to Hennings, (2004) descriptive survey has a broad appeal for planning, monitoring and evaluating policies. Creswell, (1994) says that any researcher who adopts the descriptive research design attempts to produce data that is holistic, contextual, descriptive in depth and rich in detail. The explorative nature of the research necessitates that the participant's knowledge, views, understandings, interpretations, experiences and interactions are considered in order to construct situational knowledge.

The study also included both quantitative and qualitative analysis techniques. The qualitative analysis aimed to give a complete, detailed description in the form of words, pictures or objects while the quantitative analysis classified features, counted them and constructed statistical models in an attempt to explain what is observed (Creswell, 1994).
3.3 Target Population

The target population refers to the specific group relevant to a particular study. Mugenda and Mugenda (2003) explain that a population is a group of individuals or objects that have the same form of characteristics. They are the “totality of cases that conform to certain specifications, which defines the elements that are included or excluded in the target group”. The target population for this study included the three levels of stakeholders of the LAPSET project as follows: The Regulators, who are the government officials specifically within the Ministry of Transport and Infrastructure; The Consumers, who included the Kenya Ports Authority (KPA); and the Private sector, who included officials from the Kenya Private Sector Alliance (KEPSA).

Table 3.1: Target Population

<table>
<thead>
<tr>
<th>Strata</th>
<th>Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Regulator – Top Officials at the Ministry of Transport and Infrastructure</td>
<td>50</td>
</tr>
<tr>
<td>2 Consumers – Officials at KPA</td>
<td>40</td>
</tr>
<tr>
<td>3 Private Sector – Officials at the KEPSA</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
</tr>
</tbody>
</table>

*Source: Ministry of Transport and Infrastructure (2013), KPA (2013), KEPSA (2013)*

3.4 Sample size and Sampling Procedure

A sample is a smaller number or the population that is used to make conclusions regarding the whole population. Its purpose is to estimate unknown characteristics of the population. Sampling therefore is the systematic process of selecting a number of individuals for a study to represent the larger group from which they were selected (Marshal & Rossman, 1999). The process of sampling takes in to account various issues and will depend on the organization type, purpose, complexity, time constraints and previous research in the area.

The researcher used the stratified sampling technique where the respondents were separated into their respective strata with respect to their stakeholder role. The strata were the regulators, the consumers and the private sector as presented in Table 3.1 above.

Secondly, due to the limited number of total population, the researcher opted to survey the entire population. According to Creswell (2009), it is advisable to study the entire population when they are estimated to be less than 100. Based on this the population becomes the sample.
Due to time and cost constraints, the respondents were purposively drawn in the urban areas of the Nairobi county and Mombasa county. These counties were preferred because they have the highest population of stakeholders which is estimated to be over 80% of the total. The term "purposive sampling" is applied to those situations where the researcher already knows something about the specific people and deliberately selects particular participants because they are seen as likely to produce the most valuable data (Babbie, 1992).

3.5 Data collection Method

The researcher mainly used questionnaires as the primary data collection instrument. According to Hennings (2004), a self-administered questionnaire is the only way to elicit self-report on people’s opinion, attitudes, beliefs, and values. The questionnaire was designed to give a brief introduction of respondents. The questionnaire was divided into sections representing the various variables adopted for study. Each section of the chosen study included closed structured and open ended questions which will seek the views, opinion, and attitude from the respondent which might not have been captured by the researcher. The questions were designed to collect qualitative and quantitative data. The open ended questionnaires gave unrestricted freedom of answer to respondents.

3.6 Validity and Reliability of Research Instrument

The study used validity and reliability tests to ensure meaningfulness and consistency of the results.

3.6.1 Validity of Research Instruments

Validity refers to the accuracy and meaningfulness of inferences, which are based on the research results. According to Mugenda and Mugenda (1999), the usual procedure in assessing the content validity of a measure is to use a professional or expert in a particular field which helps in discovering question content, correction in the wording and the sequencing problems before the actual study as well as exploring ways of improving overall quality of study. For the sake of this study, the researcher sought opinions of experts in the field of study especially the lecturers in the department of project management to establish the validity of the research instrument. This facilitated the necessary revision and modification of the research instrument thereby enhancing validity.
3.6.2 Reliability of Research Instruments

Reliability of the data collection instrument is the consistency of measurement and frequently assessed using a test–retest reliability method; Cooper and Schinder (2007). Reliability enabled the researcher to identify the ambiguities and inadequate items in the research instrument; where the instrument reliability is the dependability, consistency or trustworthiness of a test.

The test-retest technique was the measure, where questionnaires were administered to a group of individuals (according to the tested number) with similar characteristics as the actual sample. Tests were repeated at intervals of one week. The scores obtained from each tests were correlated to get the coefficient of reliability. In the event that the Spearman’s Rank Correlation Coefficient falls at an average of 0.75, it would be certain that the instrument is 85% reliable and therefore reliable and consistent to answer the research questions of the study.

3.7 Data Collection Procedure

The questionnaires were administered by trained research assistants to be completed by the respondents. The respondents were given a time frame within which they were required to respond to the questionnaire. Upon completion, the research assistants collected the questionnaires and ensured high completion rate and return of the completed questionnaires.

Secondary data involved data that was collected from other past data that had been collected and tabulated through graphs, charts, and reports. This type of data was collected from reference materials, which have key information and were helpful to this research study. Collection of secondary data was obtained through desk research, which were either from internal or external sources. The external source included publication press, newspapers, libraries, and various research related organizations.

3.8 Data Analysis methods

The filled questionnaires were checked for completeness at two levels where the data collectors verified that questionnaires were complete before they were taken to the researcher to do the final verification. This was done to ensure that any anomalies detected were corrected immediately before the questionnaire were taken from the respondent.

Data analysis started once all the data had been captured. Closed-ended questions were analyzed using nominal scales into mutually exclusive categories and frequencies by employing
descriptive statistics using the statistical package for social sciences (SPSS V 20.0) and MS Excel. Open-ended questions were analyzed using conceptual content analysis. Analysis involved the production and interpretation of frequencies counts, tables and graphs that described and summarized the data. The study also applied means, correlations and factor analysis to provide conclusions and comparisons on the variables.

3.9 Ethical considerations

The goal of ethics is to ensure that no one is harmed or suffers adverse consequence from the research activities. Given the often sensitive relationships between researcher and respondents, reasonable safeguards were built in this study based on ethical considerations and requirements. Therefore, the information that the researcher received during the period of this study were treated in confidence and purely for academic purposes. Names or respondents were not used or mentioned in this study.

3.10 Operational Definition of variables

The following table shows the operational definition of variables for this study, indicators, measurement, and the data collection methods that were used.

Table 3.2 Operational Definition of variables

<table>
<thead>
<tr>
<th>Objective/Research question</th>
<th>Type of variable</th>
<th>Indicators</th>
<th>Measure</th>
<th>Level of scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>How do positive environmental impacts influence the design of LAPSSET Corridor project?</td>
<td>Environmental Impact</td>
<td>- Considering impact in decision making&lt;br&gt;- Justification of potential adverse effect&lt;br&gt;- Link various activities and impact on the environment&lt;br&gt;- Environmental management measures</td>
<td>- Environmental impact of LAPSSET corridor</td>
<td>Ordinal</td>
</tr>
<tr>
<td>How does financial capability of partners influence the design of LAPSSET Corridor project?</td>
<td>Financial capabilities</td>
<td>- Ability to deal with fluctuating interest/exchange rates&lt;br&gt;- Sound financial analysis capabilities&lt;br&gt;- Ability to fully finance project&lt;br&gt;- Understanding taxation requirements and implications</td>
<td>- Levels of financial capabilities&lt;br&gt;- Knowledge of financial management practices</td>
<td>Ratio</td>
</tr>
</tbody>
</table>

26
| To what extent does a strong consortium influence the design of LAPSSET Corridor project? | Strong Consortium | - Strong capable project team  
- Effective project organization structure  
- Sound technical solution to emerging problems  
- Joint risk bearing strategies  
- Rich experience in PPP management | - Strength of LAPSSET consortium | Ordinal |
| What is the influence of a developed legal framework in the design of LAPSSET Corridor project? | Legal Framework | - Efficient and Effective legal system  
- Binding contractual agreements  
- Encourages accountability and transparency  
- Reasonable legal costs  
- Mitigation of legal disputes | - Level of development of legal framework | Ordinal |
| How does an efficient procurement process influence the implementation of LAPSSET Corridor project? | Procurement Processes | - Competitive, independent, and fair process. | - Level of efficiency and effectiveness of the procurement process | Ordinal |
CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

The rationale of the study was to assess the critical success factors influencing the design of public private partnership projects. This chapter presents the research findings that comprehensively answer the research questions. This chapter presents the response rate, the demographic profile, and profiled data and presents it in descriptive tables using mean and standard deviation, and uses bar graphs, charts and pie charts to present the findings.

4.2 Response Rate

Out of 100 questionnaires distributed, a total of 73 were responded to. This is equivalent to a response rate of 73%, as presented in table 4.1 next. According to Saunders et. al (2009), a 50% response rate is adequate, 60% good and above 70% rated very good. The very good response rate for this study is testament to the significance of the critical success factors or PPPs and the extent to which the respondents were willing to emphasize of the factors that were critical to the LAPSSET project.

A cross analysis of this response rate indicate that out of the total of 73 respondents, 7 were senior officials at the Kenya Private Sector Alliance (KEPSA), 37 were senior government officials (Public Sector) and 29 were senior officials at the Kenya Ports Authority (Consumers) as presented in figure 4.2 next. This response rate was also very good across the three selected strata as they were all above 70% as shown in the table next.

<table>
<thead>
<tr>
<th>Questionnaires Issued</th>
<th>Questionnaires Returned</th>
<th>Return Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>73</td>
<td>73%</td>
</tr>
</tbody>
</table>

A cross analysis of this response rate indicate that out of the total of 73 respondents, 7 were senior officials at the Kenya Private Sector Alliance (KEPSA), 37 were senior government officials (Public Sector) and 29 were senior officials at the Kenya Ports Authority (Consumers) as presented in figure 4.2 next. This response rate was also very good across the three selected strata as they were all above 70% as shown in the table next.
Table 4.2: Cross Analysis of Response rate

<table>
<thead>
<tr>
<th></th>
<th>Issued</th>
<th>returned</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Sector</td>
<td>50</td>
<td>37</td>
<td>74</td>
</tr>
<tr>
<td>Private sector</td>
<td>10</td>
<td>7</td>
<td>70</td>
</tr>
<tr>
<td>Consumer</td>
<td>40</td>
<td>29</td>
<td>73</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>100</strong></td>
<td><strong>73</strong></td>
<td></td>
</tr>
</tbody>
</table>

4.3 Demographic characteristics of Respondents
This section will classify the respondents according to the length of service and the departments they are stationed at.

4.3.1 Length of Service

With regards to their year of experience, cross analysis was used to tabulate the respondent and the years of experience in their specific areas. From the findings, 35% of officials in the public sector had served for 6 to 9 years, 32% for 2 to 5 years, 27% for over 10 years and 5% for less than 1 year. With regards to private sector officials, 43% had served for less than 1 year, 29% for 6 to 9 years and 29% for 2 to 5 as presented in table 4.3 next. A majority of both members of the public sector and the consumers at KPA had greater than 5 years experience in their respective duties and therefore were fully qualified and had enough information to adequately respond to the study.

Also to note was that a majority of members from the private sector had served in their capacity for less than 5 years. This could be attributed to the fact that officials from the Kenya Private Sector Alliance (KEPSA) serve on short term tenures. However, the researcher was assured that the respondents had the requisite information to respond to the study questions.

Table 4.3: Length of Service

<table>
<thead>
<tr>
<th></th>
<th>Public Sector</th>
<th>Private Sector</th>
<th>Consumer</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percentage</td>
<td>Frequency</td>
</tr>
<tr>
<td>less Than 1 yr</td>
<td>2</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>2 to 5 yrs</td>
<td>12</td>
<td>32</td>
<td>2</td>
</tr>
<tr>
<td>6 to 9 yrs</td>
<td>13</td>
<td>35</td>
<td>2</td>
</tr>
<tr>
<td>over 10 yrs</td>
<td>10</td>
<td>27</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>37</strong></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>
4.3.2 Department Stationed

With regard to the departments stationed, cross analysis was also used to tabulate the responses. The findings indicate that with respect to officials from the public sector, 38% were engineers, 27% from finance, 16% from legal, 11% from risk and 8% from procurement departments. With regard to officials from the private sector, 43% were from finance, 29% from procurement, 14% from engineering, and 14% from legal department. Out of the consumers, two thirds were from engineering, 21% form finance, 7% from procurement, 3% from risk and 3% from legal. A majority of respondents in all the three strata came from the engineering and finance departments. This could be attributed to the fact that the LAPSSET corridor is an infrastructure development project and therefore involved engineers as well as finance and procurement personnel. The other respondents are from diverse departments and therefore would be a source of information relating to the other LAPSSET PPP aspects.

Table 4.4: Department Stationed

<table>
<thead>
<tr>
<th></th>
<th>Public Sector</th>
<th>Private Sector</th>
<th>Consumer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>Percentage</td>
<td>Frequency</td>
<td>Percentage</td>
</tr>
<tr>
<td>Engineering</td>
<td>14</td>
<td>1</td>
<td>14</td>
</tr>
<tr>
<td>Risk</td>
<td>4</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Finance</td>
<td>10</td>
<td>3</td>
<td>43</td>
</tr>
<tr>
<td>Legal</td>
<td>6</td>
<td>1</td>
<td>14</td>
</tr>
<tr>
<td>Procurement</td>
<td>3</td>
<td>2</td>
<td>29</td>
</tr>
<tr>
<td>Total</td>
<td>37</td>
<td>7</td>
<td>100</td>
</tr>
</tbody>
</table>

4.4 Positive Environmental Impact

The first objective of the study was to establish the influence of positive environmental impact on the design of LAPSSET Corridor project. One of the major processes of evaluating the environmental impact of the project is conducting an environmental impact assessment test (EIA). On inquiring whether the EIA was conducted, 93% of the respondents from across the three strata agreed that the tests were conducted while 7% did not. A cross analysis indicated that all officials from the public and public sector agreed however, 17% of respondents from the consumers were not aware whether the EIA was conducted. This finding indicates that a positive environmental impact is a critical success factor for the LAPSSET project as seen by the very high positive response from the respondents. Though the percentage of those not aware is low, it
is also important to note that a majority of them come from the consumer strata who are usually not involved in the EIA phases of the project.

Table 4.5 Environmental Impact Assessment

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>68</td>
</tr>
<tr>
<td>No</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>73</td>
</tr>
</tbody>
</table>

When asked whether there are regular reviews of the EIA, 71% of the respondents said yes while 21% said no as presented in figure 4.2 next. Though most of the respondents were aware of the importance of the EIA, fewer were aware whether there were regular reviews.

Table 4.6: Regular Review of Environmental Impact Assessment

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>52</td>
</tr>
<tr>
<td>No</td>
<td>21</td>
</tr>
<tr>
<td>Total</td>
<td>73</td>
</tr>
</tbody>
</table>

The respondents that were aware of the regular EIA reviews were further asked to indicate the frequency of the EIA tests. In their response, 60% indicated annually, 21% semi annually, 12% quarterly and 8% monthly. A cross analysis indicated that a majority of the officials from the public sector are the ones who indicated annually while both the private sector and consumers were somewhat evenly distributed between semi annually and quarterly. This findings indicate the since the private sector take charge of the implementation of the project, they are more likely to have a more frequent review than the public sector.

Table 4.7 Frequency of EIA review

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annually</td>
<td>31</td>
</tr>
<tr>
<td>Semi annually</td>
<td>11</td>
</tr>
<tr>
<td>Quarterly</td>
<td>6</td>
</tr>
<tr>
<td>Monthly</td>
<td>4</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>52</td>
</tr>
</tbody>
</table>
The study further sought to evaluate the importance of positive environmental impact as a critical success factor for the LAPSSET corridor project by rating their perception using a 5 level scale (5-strongly agree, 4-agree, 3-neutral, 2-disagree, 1-strongly disagree).

When asked whether decision makers of the LAPSSET corridor project consider the EIA in decision making, 85% strongly agreed, 11% agreed and only 4% were neutral. These findings indicate that the environmental impacts of the project form a major part of decision making of the LAPSSET project.

With regard to whether the negative environmental impacts identified by the EIA have justifications to allow continuing of the LAPSSET corridor project, 80% strongly agreed, 19% agreed and 1% were neutral, indicating a keen approach by the project team to weigh the advantages and disadvantages of impacts identified by the EIA.

The respondents were also asked if the EIA looks at the nature of site activities in detail and sensitivity to the environment. In their response, 82% strongly agreed, 12% agreed and 6% were neutral.

Similarly, when asked whether mitigation of negative environmental impacts is in place before commencement of the project, 89% strongly agreed, 8% agreed and 3% were neutral. These findings indicate that the project team has paid great attention to the environmental impact of the project and have put in place measures to mitigate and relieve any negative environmental consequences of the LAPSSET project.

On performing a cross analysis of these findings, the responses were said to be evenly distributed between the three strata and there was no significant differences in response among the three stakeholder groups.
Table 4.8 Respondents perception on positive environmental impact as a Critical success factor

<p>| | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Decision makers of the LAPSSET Corridor project consider the EIA in decision making</td>
<td>Frequency</td>
<td>62</td>
<td>8</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Percentage</td>
<td>84.9</td>
<td>11.0</td>
<td>4.1</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>2. Negative environmental impacts have justifications in order to continue with the LAPSSET Corridor project</td>
<td>Frequency</td>
<td>58</td>
<td>14</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Percentage</td>
<td>79.5</td>
<td>19.2</td>
<td>1.4</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>3. The EIA looks at the nature of site activities in detail and sensitivity to the environment</td>
<td>Frequency</td>
<td>60</td>
<td>9</td>
<td>4</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Percentage</td>
<td>82.2</td>
<td>12.3</td>
<td>5.5</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>4. Mitigation of negative environmental impacts is in place before commencement of the project.</td>
<td>Frequency</td>
<td>65</td>
<td>6</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Percentage</td>
<td>89.0</td>
<td>8.2</td>
<td>2.7</td>
<td>0.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

With regard to testing the hypothesis that Positive environmental impact does influence the design of the LAPSSET corridor project, the chi square levels of the predictor variable are above 70 indicating that a positive environmental impact is of very high significance and importance to the LAPSSET project and therefore influences the design of the project.

Table 4.9 Testing of research hypothesis

<table>
<thead>
<tr>
<th>Decision makers of the LAPSSET Corridor project consider the EIA in decision making</th>
<th>Negative environmental impacts have justifications in order to continue with the LAPSSET Corridor project</th>
<th>The EIA looks at the nature of site activities in detail and sensitivity to the environment</th>
<th>Mitigation of negative environmental impacts is in place before commencement of the project.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-Square(a,b)</td>
<td>86.691</td>
<td>82.691</td>
<td>84.763</td>
</tr>
<tr>
<td>Df</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Asymp. Sig.</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
</tbody>
</table>

4.5 Financial Capabilities

The government in contracting out the PPP projects should ensure that the parties in the private sector consortium are sufficiently competent and financially capable of taking up the projects. The second objective of the study therefore was to establish the influence of partners’ financial capabilities on the design of LAPSSET Corridor project. The respondents were first asked whether they consider the project partners’ financial capabilities important in design of the
LAPSSET corridor project. In their response, 97% said yes while only 3% said no as indicated in figure 4.3 next. This shows that financial capabilities are also a very critical factor to the design of the project.

**Table 4.10: Importance of Project Partners’ Financial Capabilities**

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>71</td>
<td>97</td>
</tr>
<tr>
<td>No</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>73</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

The study further sought to evaluate the importance of specific partners’ financial capabilities as a critical success factor for the LAPSSET corridor project by rating their perception using a 5 level scale (5-strongly agree, 4-agree, 3-neutral, 2-disagree, 1-strongly disagree).

The respondents were asked whether the partners have the ability to deal with fluctuations in interest and exchange rates. In their response, 81% strongly agreed and the remaining 19% agreed. This indicates that being able to mitigate against unforeseen fluctuation in foreign and interest rates was a requirement in selection of the project consortium.

With regard to whether all partners have sound financial analysis capabilities, 66% strongly agreed, 30% agreed and only 4% were neutral. This indicates that though financial capabilities are important, the respondents were not as confident about the analysis capabilities of the consortium as they were with the previous indicator.

The respondents were further asked whether the partners have the ability to fully finance their share of the project, 90% strongly agreed and the remaining 10% agreed. This was a clear indicator of the financial strength in terms of project financing of the project consortium.

In response to whether the partners have high debt to equity ratio in their balance sheet, 51% strongly agreed, 33% agreed and 16% were neutral. This findings show that there could be part of the project consortium that are greatly financed by debt as opposed to equity. This is normally the case in situations that require heavy capital investments.

Finally, when asked whether all partners understand the tax requirements and its implications on the project, 81% strongly agreed, 14% agreed and 5% were neutral. This findings indicates that
all the partners of the LAPSSET corridor project are aware of tax requirements and implications pertaining to the project.

**Table 4.11 Respondents perception on financial capabilities as a Critical success factor**

<table>
<thead>
<tr>
<th></th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The partners have the abilities to deal with fluctuations</td>
<td>Frequency</td>
<td>59</td>
<td>14</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>in interest/exchange rates</td>
<td>Percentage</td>
<td>80.8</td>
<td>19.2</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>2. All partners have sound financial analysis capabilities</td>
<td>Frequency</td>
<td>48</td>
<td>22</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Percentage</td>
<td>65.8</td>
<td>30.1</td>
<td>4.1</td>
<td>0.0</td>
</tr>
<tr>
<td>3. The partners have the ability to fully finance the project</td>
<td>Frequency</td>
<td>66</td>
<td>7</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Percentage</td>
<td>90.4</td>
<td>9.6</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>4. The partners have High equity/debt ratio in their balance</td>
<td>Frequency</td>
<td>37</td>
<td>24</td>
<td>12</td>
<td>0</td>
</tr>
<tr>
<td>sheets</td>
<td>Percentage</td>
<td>50.7</td>
<td>32.9</td>
<td>16.4</td>
<td>0.0</td>
</tr>
<tr>
<td>5. All partners understand the tax requirements and</td>
<td>Frequency</td>
<td>59</td>
<td>10</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>implications on the project</td>
<td>Percentage</td>
<td>80.8</td>
<td>13.7</td>
<td>5.5</td>
<td>0.0</td>
</tr>
</tbody>
</table>

With regard to testing the hypothesis that financial capabilities does influence the design of the LAPSSET corridor project, all the chi square levels of the predictor variable apart from the equity to debt ratio of partners (65.4) are above 70 indicating that the financial capabilities of the partners is of very high significance and importance to the LAPSSET project and therefore affects design of the project.

**Table 4.12 Testing of research hypothesis**

<table>
<thead>
<tr>
<th>The partners have the abilities to deal with fluctuations in</th>
<th>All partners have sound financial analysis capabilities</th>
<th>The partners have the ability to fully finance the project</th>
<th>The partners have High equity/debt ratio in their balance sheets</th>
<th>All partners understand the tax requirements and implications on the project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-Square</td>
<td>84.371</td>
<td>72.082</td>
<td>93.402</td>
<td>84.299</td>
</tr>
<tr>
<td>Df</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Asymp. Sig.</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
</tbody>
</table>
4.6 Strong Consortium

Both the public and private companies should explore other participants' strengths and weaknesses and, where appropriate, join together to form consortia capable of synergizing and exploiting their individual strengths. The third objective of the study therefore was to establish the influence of a strong consortium on the design of LAPSSET Corridor project. The respondents were first asked whether they consider a strong consortium as important in design of the LAPSSET corridor project. In their response, 96% said yes while only 4% said no as indicated below.

Table 4.13: Importance of Strong Consortium

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>70</td>
</tr>
<tr>
<td>No</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>73</td>
</tr>
</tbody>
</table>

The respondents were also asked whether there were regular reviews on the strength and weaknesses of all partners in the consortium. In their response, 53% said yes while the remaining 47% said no. This indicates that nearly half of the respondents were not aware of regular reviews concerning the strength and weaknesses of members of the consortium.

Table 4.14: Review of consortium members strengths

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>39</td>
</tr>
<tr>
<td>No</td>
<td>34</td>
</tr>
<tr>
<td>Total</td>
<td>73</td>
</tr>
</tbody>
</table>

The study further sought to evaluate the importance of a strong consortium as a critical success factor for the LAPSSET corridor project by rating their perception using a 5 level scale (5- strongly agree, 4-agree, 3-neutral, 2-disagree, 1-strongly disagree).

The respondents were first asked whether the LAPSSET consortium comprises a strong and capable team. In their response, 75% strongly agreed, 16% agreed, 7% were neutral and 1%
disagreed. This indicates that a majority of the respondents are very confident in the strength and capabilities of the project consortium.

With regard to whether the consortium has an effective project organization structure, 78% strongly agreed, 15% agreed, and 7% were neutral. This finding show that the respondents from the three strata perceive the projects organization structure as effective in the execution of the project.

When asked whether the consortium has sound technical solution to emerging problems, 69% strongly agreed, 16% agreed, and 15% were neutral. Though slightly less in confidence as the previous findings, the respondents seem to be happy with the technical solving problems capability of members of the consortium.

In response to whether there was adequate joint risk bearing strategies in the project consortium, 82% strongly agreed, and 18% agreed. This finding indicate that the agreement between members of the consortium has adequately distributed relevant risks to all the members.

Finally with regard to whether members of the consortium have rich experience in international PPP project management, 55% strongly agreed, 20% agreed, 6% were neutral and 19% disagreed. This findings shows some of uncertainty regarding the international experience of the project management. However, more than half of the repondents were confident of their experience. A cross analysis of this findings indicates that members of the private sector and cosumers have a significant lower level confidence than members in the public sector.

| Table 4.15 Respondents perception on a strong consortium as a Critical success factor |
|---------------------------------|---|---|---|---|---|
| 1. The consortium comprises a Strong and capable project team | Frequency | 55 | 12 | 5 | 1 | 0 |
| 2. The consortium has an effective project organization structure | Percentage | 75.3 | 16.4 | 6.8 | 1.4 | 0.0 |
| 3. The consortium has Sound technical solution to emerging problems | Frequency | 57 | 11 | 5 | 0 | 0 |
| 4. There is adequate Joint risk bearing strategies in the project consortium | Percentage | 78.1 | 15.1 | 6.8 | 0.0 | 0.0 |
| 5. Members of the consortium have rich experience in international PPP project management | Frequency | 68.5 | 16.4 | 15.1 | 0.0 | 0.0 |
| | Percentage | 82.2 | 17.8 | 0.0 | 0.0 | 0.0 |
| | Frequency | 60 | 13 | 0 | 0 | 0 |
| | Percentage | 54.8 | 20.5 | 5.5 | 19.2 | 0.0 |
With regard to testing the hypothesis that a strong consortium does influence the design of the LAPSSET corridor project, all the chi square levels of the predictor variable apart from the members having rich experience in international PPP (67.4) are above 70 indicating that the strong consortium of the partners is of very high significance and importance and therefore influence to the LAPSSET project.

**Table 4.16: Testing of research hypothesis**

<table>
<thead>
<tr>
<th>The consortium comprises a Strong and capable project team</th>
<th>The consortium has an effective project organization structure</th>
<th>The consortium has Sound technical solution to emerging problems</th>
<th>There is adequate Joint risk bearing strategies in the project consortium</th>
<th>Members of the consortium have rich experience in international PPP project management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-Square</td>
<td>79.248</td>
<td>82.582</td>
<td>72.592</td>
<td>86.411</td>
</tr>
<tr>
<td>Df</td>
<td>2</td>
<td>4</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Asymp. Sig.</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
</tbody>
</table>

### 4.7 Developed Legal Framework

The final objective of the study was to establish the influence of a developed legal framework on the design of LAPSSET Corridor project. The respondents were first asked whether they consider a developed legal framework influential in design of the LAPSSET corridor project. In their response, 95% said yes while only 5% said no as indicated in figure 4.4 next. This finding indicates that according to the respondents, a developed legal framework is considered a critical success factors for the project. A cross analysis of this findings shows that the response is nearly similar across the three strata studied.

**Table 4.17: Importance of developed legal framework**

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>69</td>
</tr>
<tr>
<td>No</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>73</td>
</tr>
</tbody>
</table>
The study finally sought to evaluate the importance of a developed legal system as a critical success factor for the LAPSSET corridor project by rating their perception using a 5 level scale (5-strongly agree, 4-agree, 3-neutral, 2-disagree, 1-strongly disagree).

In this regard, the respondents were first asked if the Kenyan legal system was efficient and effective in dispute resolution. In their response, 28% strongly agreed, 34% agreed, 21% were neutral, 11% disagreed and 6% strongly agreed. This finding show that though more than half of the respondents were confident with the efficiency of the Kenyan legal system, a significant percentage was not confident. A cross analysis of this findings indicates that the private sector and consumers were less confident of the legal system than the public sector members.

When asked whether there was a strong and binding contractual agreement between the partners, 78% strongly agreed and 22% agreed. The finding indicates that the contractual agreement between the partners was strong and binding to all parties.

With regard to whether the agreement between the partners of the project encouraged accountability and transparency, 70% strongly agreed, 21% agreed and 10% were neutral. This finding indicates that the agreement between the partners has taken care of issues that might arise from lack of accountability and transparency.

When asked whether the legal services required can be procured at reasonable costs, 47% strongly agreed, 37% agreed, and 16% were neutral. This finding show that according to the respondents, the price of legal services pertaining to the PPPs are reasonable.

The respondents were finally asked whether mitigation of legal disputes arising between partners is in place before commencement of the project. In their response, 66% strongly agreed, 33% agreed and only 1% were neutral, indicating that the agreement between the partners has adequately covered instance of legal disagreements between the partners.
Table 4.18: Respondents perception on a developed legal framework as a Critical success factor

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The Kenyan legal system is efficient and effective in dispute resolutions</td>
<td>Percentage</td>
<td>28.8</td>
<td>34.2</td>
<td>20.5</td>
<td>11.0</td>
<td>5.5</td>
</tr>
<tr>
<td>2. There is a strong and binding contractual agreement between the partners</td>
<td>Frequency</td>
<td>57</td>
<td>16</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>3. The agreements between partners of the project encourage accountability and transparency</td>
<td>Percentage</td>
<td>78.1</td>
<td>21.9</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>4. The legal services required can be procured at reasonable costs</td>
<td>Frequency</td>
<td>51</td>
<td>15</td>
<td>7</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>5. Mitigation of legal disputes arising between partners is in place before commencement of the project.</td>
<td>Percentage</td>
<td>69.9</td>
<td>20.5</td>
<td>9.6</td>
<td>0.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

With regard to testing the hypothesis that a developed legal system does influence the design of the LAPSSET corridor project, three chi square levels of the predictor variable are above 70 while the remaining two are between 50 and 70 indicating that the legal system of the partners is of very high significance and importance to the LAPSSET project though the levels of operation in the country are not to the standards expected.

Table 4.19 Testing of research hypothesis

<table>
<thead>
<tr>
<th>The Kenyan legal system is efficient and effective in dispute resolutions</th>
<th>There is a strong and binding contractual agreement between the partners</th>
<th>The agreements between partners of the project encourage accountability and transparency</th>
<th>The legal services required can be procured at reasonable costs</th>
<th>Mitigation of legal disputes arising between partners is in place before commencement of the project.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-Square</td>
<td>52.248</td>
<td>82.582</td>
<td>75.592</td>
<td>66.411</td>
</tr>
<tr>
<td>Df</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Asymp. Sig.</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
</tbody>
</table>
CHAPTER FIVE
SUMMARY OF FINDINGS, DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The purpose of the study was to evaluate the extent to which CSFs influence the design of PPPs with a focus on LAPSSET corridor project. The research design used was a descriptive survey design. The population of interest was the top officials from the public sector, private sector and consumers involved in the project. The target population of 100 respondents was chosen to be the subjects of the study. The researcher used self-administered questionnaire to collect data. The study was guided by the following predictor variable; positive environmental impact, partner’s financial capabilities, a strong consortium and a developed legal framework. The mitigating factor was an efficient procurement process. This chapter therefore presents the summary of findings, the conclusions derived and recommendations.

5.2 Summary of Findings

With regard to the demographic information, the response rate for this study was very good and was a testament to the significance of the critical success factors or PPPs and the extent to which the respondents were willing to emphasize of the factors that were critical to the LAPSSET project. A majority of of the respondents also had the requisite experience in their respective duties and therefore was fully qualified and had enough information to adequately respond to the study. Many of the respondents were from the engineering and finance departments due to the fact that the project is an infrastructure development project and therefore involved engineers as well as finance and procurement personnel. The other respondents were from diverse departments and therefore provided a diverse source of information relating to the other LAPSSET PPP aspects.

In regard to the extent to which a Positive Environmental Impact affects design of LAPSSET corridor project, a majority of the respondents agreed that positive environmental impact was a significant CSF for the implementation of the LAPSSET corridor project. The extent to which this CSF influences the design of the project is seen through the statistical chi square tests of the predictor variables which were above 70%.
Nearly all the respondents indicated that the partners’ financial capabilities were critical to the design of the LAPSSET project. The extent to which the partners, financial capabilities affect the design of the project was indicated by the results of the chi square tests where four out of the five predictor variables ranked to a very great extent while one predictor variable ranked to a great extent.

Similarly, with regard to the extent to which a strong consortium affects the design of the LAPSSET project, a great majority of the respondents indicated that it was very critical to the design of the project. The extent to which the strength of the consortium affected the design of the project was indicated by the results of the chi square tests where four out of the five predictor variables ranked to a very great extent while one predictor variable ranked to a great extent.

Finally, with regard to the extent to which a developed legal framework affects the design of the LAPSSET project, majority of the respondents indicated that it was very critical to the design of the project. The extent to which the strength of a developed legal framework affected the design of the project was indicated by the results of the chi square tests where three out of the five predictor variables ranked to a very great extent one predictor variable ranked to a great extent and the final predictor ranked to a moderate extent.

5.3 Discussions

According to Russel, 2008, the environmental impact assessment involves the process of identifying, predicting, evaluating and mitigating the biophysical, social, and other relevant effects of development proposals prior to major decisions being taken and commitments made. This requires decision makers to account for environmental values in their decisions and to justify those decisions in light of detailed environmental studies and public comments on the potential environmental impacts of the projects. The findings show that this has been implemented and done in the design of the LAPSSET corridor project. Similarly, Jefferies et al., (2002) states that to minimize negative environmental impact it is important to understand the link between various project activities and the potential for these activities to impact on the environment. The findings show that the management of the project has been able to link the project activities with their respective environmental impact.
Many researchers have found that project financing and financial capabilities of the partners are a key factor for private sector investment in public infrastructure projects as discussed in the literature. This is clearly illustrated in the findings as it has been shown that financially capable Public Private Partners of the LAPSSSET corridor project have been able to: understand their project financial forecasts and implications as well as other basic financial records, understand the implications of borrowing money repayment over time, usually with interest, the use cash and non-cash methods of payment, manage project budgets and prioritize essential and non-essential spending, and understand taxation requirements and implications on project revenues.

According to Jefferies et al., 2002, a strong consortium of partners is very crucial in the design of the project. This has been confirmed in the findings as it is considered as a major influence to the LAPSSSET corridor project. The findings indicate that the government in contracting out the PPP projects has ensured that the parties in the private sector consortium are sufficiently competent and financially capable of taking up the projects, which is in line with the literature. The partners should have explored each other’s strengths and weaknesses and are exploiting their individual strengths. Apart from financial muscle, the strength of private sector participants lies in the management team they deploy where a capable team should have extensive experience in the projects.

It is said that an independent, fair and efficient legal framework is a key factor to consider in the design of a PPP project. This has been considered greatly in the design of the LAPSSSET corridor project as evidenced in the findings. According to Hardcastle (2005), the developed legal framework can contribute significantly to the accountability and transparency in a PPPs environment, because it serves as a mechanism for channeling constructive conflict towards positive outcomes. However, there are concerns that the Kenyan legal system may not be as strong and developed as it ought to be.
5.4 Conclusions

Based on the demographic information of the respondents, we can therefore conclude that the respondents in this study were more than adequate in terms of knowledge, experience and information required to validate the study.

From the findings relating to the influence of a positive environmental impact, we can conclude that a positive environmental impact is a very important CSF and influences the design of the project to a very great extent. The null hypothesis that a positive environmental impact does influence design of the LAPSSET corridor project is therefore accepted.

With regard to the findings on financial capabilities, we can conclude that the partners’ financial capabilities are a very important CSF and influence the design of the project to a very great extent. The null hypothesis that financial capabilities of partners do influence design of the LAPSSET corridor project is therefore accepted.

From the findings relating to a strong consortium, we can conclude that a strong consortium is a very important CSF and influence the design of the project to a very great extent. The null hypothesis that a strong consortium does influence design of the LAPSSET corridor project is therefore accepted.

Finally, from the findings, we can conclude that a developed legal framework is a very important CSF and influence the design of the project to a great extent. The null hypothesis that a developed legal framework does influence design of the LAPSSET corridor project is therefore accepted.

5.5 Recommendations

Following these results, findings and conclusions of this study, the following recommendations are made:

The LAPSSET corridor is a major infrastructure development project that will benefit not only Kenya, but the entire East African community. Information sharing and provision to all stakeholders as well as the general public should be encouraged so as to increase participation of all stakeholders and good will from the immediate consumers and the general public.
With regard to the extent to which positive environmental impacts affects the project, it can be recommended that due to the dynamic nature of the environment, regular Environmental Impact Assessment should be conducted on a more regular basis so as to have an updated effects and consequences of the project to the environment. This will help mitigate all arising risks to the environment as well as finding other ways to avoid such risks.

Financial capability of the partners has been ranked as one of the top CSF of PPPs worldwide. The predictive factors therefore should affect the design and implementations of the project to a very great extent. It is therefore recommended that the debt to equity ratios of the partners be a determining factor in evaluating the financial capabilities of partners. This will help in reducing any financial risks that may result from a high debt to equity ratio.

With regard to the strength of the consortium, it is recommended that regular review of the strengths and weaknesses be assessed on a regular basis throughout the design and implementation of the project. This will ensure that the partners capitalize on each others’ strengths and assist each other in improving weaknesses. It is also recommended that the international experience of partners be a priority in selection and strengthening of the project consortium.

Finally, it was noted that a developed legal framework is very critical to the design of the PPP. However, the Kenyan legal framework is not considered as strong and effective as it ought to be. It is therefore recommended that the relevant authorities in the judiciary expedite the strengthening of the legal institutions in order to encourage efficiency and effectiveness thereby creating confidence in the PPP.

**5.6 Suggestion for Further Research**

The study sought to assess the influence of CSF on the design of the LAPSSET corridor project. Based on these the findings and conclusion, the following suggestion for further studies are presented.

1. Further research could be done on the influence of these CSF during implementation of the project and eventually after completion to assess whether their importance will change or vary during these stages.
2. Comparative studies could also be conducted on similar infrastructure projects in Africa so evaluate the similarities of differences of the projects.
REFERENCES


APPENDICES

Appendix 1: Letter of Transmittal

To whom it may concern

Dear sir/ Madam

RE: ACADEMIC RESEARCH

The above subject refers.

I am a Master of Arts student in project planning and management at the University of Nairobi, Mombasa campus.

It is a requirement to write a research project report as a partial fulfillment of the course. I am carrying out a study on the critical success factors influencing the design of public private partnership projects with a special emphasis on the Lamu port Southern-Sudan Ethiopia transport corridor project.

This is therefore to seek for permission to collect data to facilitate the same. Information provided will be strictly for academic purposes and will be treated as confidential.

Your assistance and co-operation will be highly appreciated.

Yours faithfully

Resly Mutua
Appendix II: Questionnaire

Introduction and Seeking Consent

My name is Resly Mutua, a Master of Arts student in Project planning and Management at the University of Nairobi. I am conducting a study to familiarize myself with the Critical Success Factors (CSF’s) of the LAPSSET corridor project. Your involvement and participation in the study is voluntary. I pledge to treat whatever information you provide with a lot of confidentiality. The information you provide will not be used for any other purpose other than the objectives of this study.

PART I: RESPONDENT DETAILS

1. Please indicate the Public Private Projects stakeholder category
   - Regulator – Public sector/Government [ ]
   - Private Sector [ ]
   - Consumer [ ]

2. How long have you been involved in Public Private Projects?
   - Less than 1 year [ ]
   - 2 to 5 years [ ]
   - 6 to 9 years [ ]
   - 10 years and above [ ]

3. Which department do you work in?
   - Construction/Engineering [ ]
   - Risk management [ ]
   - Finance [ ]
   - Legal [ ]
   - Procurement [ ]
   - Others (Please specify)____________________

PART II: Critical Success Factors

A. Positive Environmental Impact

1. According to your knowledge, was the Environmental Impact Assessment test for the LAPSSET Corridor project commissioned?
   - Yes [ ]
   - No [ ]

2. Are there regular reviews on the Environmental Impact Assessment test?
   - Yes [ ]
   - No [ ]

3. If yes, how often are these reviews?
   - Annually [ ]
   - Semi annually [ ]
   - Quarterly [ ]
   - Monthly [ ]
   - Other [ ]
The following are Environmental Impact Assessment (EIA) statements on the LAPSSET Corridor project. Indicate your level of agreement using the scale provided [(Key: Strongly Agree – 5, Agree – 4, Don’t Know – 3, Disagree – 2, Strongly Disagree- 1)]

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<tr>
<th></th>
<th>5</th>
<th>4</th>
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<tr>
<td>4. Decision makers of the LAPSSET Corridor project consider the EIA in decision making</td>
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<td>5. Negative environmental impacts have justifications in order to continue with the LAPSSET Corridor project</td>
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<td>6. The EIA looks at the nature of site activities in detail and sensitivity to the environment</td>
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<td>7. Mitigation of negative environmental impacts is in place before commencement of the project.</td>
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### B. Financial capabilities

1. Are financial capabilities of the LAPSSET Corridor project partners important?
   - Yes [ ]
   - No [ ]

The following are financial capability statements of partners of the LAPSSET Corridor project. Indicate your level of agreement using the scale provided[ (Key: Strongly Agree – 5, Agree – 4, Don’t Know – 3, Disagree – 2, Strongly Disagree- 1)]

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<td>2. The partners have the abilities to deal with fluctuations in interest/exchange rates</td>
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<td>3. All partners have sound financial analysis capabilities</td>
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<td>4. The partners have the ability to fully finance the project</td>
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<td>5. The partners have High equity/debt ratio in their balance sheets</td>
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<td>6. All partners understand the tax requirements and implications on the project</td>
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C. Strong Consortium

1. Do you agree that the consortium of the LAPSSET Corridor project is strong?
   - Yes [ ]
   - No [ ]

2. Are there regular reviews on the strength and weaknesses of partners in the consortium?
   - Yes [ ]
   - No [ ]

The following are statements regarding the project consortium of the LAPSSET Corridor project. Indicate your level of agreement using the scale provided[ (Key: Strongly Agree – 5, Agree – 4, Don’t Know – 3, Disagree – 2, Strongly Disagree- 1)]

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<td>3. The consortium comprises a Strong and capable project team</td>
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<td>4. The consortium has an effective project organization structure</td>
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<td>5. The consortium has Sound technical solution to emerging problems</td>
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<td>6. There is adequate Joint risk bearing strategies in the project consortium</td>
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<td>7. Members of the consortium have rich experience in international PPP project management</td>
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D. Developed Legal Framework

1. Is a developed Legal Framework influential in the design of the LAPSSET corridor project?
   - Yes [ ]
   - No [ ]

The following are legal framework statements on the LAPSSET Corridor project. Indicate your level of agreement using the scale provided[ (Key: Strongly Agree – 5, Agree – 4, Don’t Know – 3, Disagree – 2, Strongly Disagree- 1)]
1. The Kenyan legal system is efficient and effective in dispute resolutions

2. There is a strong and binding contractual agreement between the partners

3. The agreements between partners of the project encourage accountability and transparency

4. The legal services required can be procured at reasonable costs

5. Mitigation of legal disputes arising between partners is in place before commencement of the project.