Novelty Journals

ISSN 2394-9694

International Journal of Novel Research in Humanity and Social Sciences
Vol. 5, Issue 5, pp: (196-214), Month: September - October 2018, Available at: www.noveltyjournals.com

DETERMINANTS OF SUCCESSFUL IMPLEMENTATION OF INFRASTRUCTURE PROJECTS IN KENYA: THE CASE OF LAPSSET PROJECT, LAMU PORT

[1]ABDALLA MOHAMED ABDALLA FADHIL, [2]PROF. SAEED MWAGUNI, [3]JOHNBOSCO M. KISIMBII

Abstract: **The focus of this study was to investigate those that determine the factors determining the successful implementation of infrastructure projects in Kenya, with a special reference to LAPSSET project, in Lamu Port. Infrastructure projects like ports, roads and bridges are critical to success of any developed or developing economy. Hence, this study was guided by four objectives: to examine the influence of reach assessment in the successful implementation of infrastructure projects in Kenya; to assess the influence of environmental factors on the successful implementation of infrastructure projects in Kenya; to determine implementation of infrastructure projects in Kenya; to determine (include the four objectives). The study reviewed literature based on the four themes of the study variables and various gaps well identified that this study addressed, this study was guided my three theories; the social dialectical theory, resource-based theory and the principal-agent theory. The study adopted descriptive research design to collect research data; it involved various stakeholders in the infrastructure development sector and more specifically to the port sector. These included the County Leadership, Ministry of Transport, Treasury, LAPSSET Officials, residents and the project affected people. The target population was 285 and a sample size of 75 was picked which attracted 100% response amazingly. Stratified Random Sampling Procedure was employed and use of survey questionnaire was employed as the main data collection instrument. Validity and reliability were checked and ascertained. The specific objectives of the study were to examine four critical factors which influence the successful implementation of the infrastructure projects. The independent variables were needs assessment, environmental issues, public participation and project financing. The dependent variable was the successful implementation of infrastructure projects in Kenya. The study found out that 81% of the population was of the opinion that need assessment affects the successful implementation of infrastructure projects. 71% of the population agrees that public participation influences the project's success while almost 50% of the population believes environmental issues have influence to the project's success. With project financing, almost 100% of the population opined that this is a critical factor in the success of infrastructure projects. The research concluded that these four variables are very important determinants in the successful implementation of infrastructure infrastructural projects in Kenya. The research concluded that need assessment, environmental issues, public participation and project financing are very important determinants in the successful implementation of infrastructure projects in Kenya.**

Keywords: **infrastructure projects, LAPSSET project, successful implementation, social dialectical theory.**

1. INTRODUCTION

1.1 Background to the Study:

Infrastructure projects are such heavy investments with enormous costs exceeding US$ 1 billion, and even surpass other significantly prized projects which are so lucrative to both the public and in the political arena. This is with regard to both the direct and indirect impact that they substantially exhibit in the prevailing environment, economy and budget

(Flyvbjerg, 2009). In the field of infrastructure, many projects have been undertaken for quite some time around the world and there are numerous infrastructure, construction, and building projects which have overwhelmingly succeeded or miserably failed. Despite the amount of interest vested in infrastructure projects, it is normally their advantages rather than potential obstacles that are touched.

Globally, the top infrastructure projects incorporate: the $22 billion Three Gorges Dam of China to be completed in 15 years, the $20 billion new Dubai Airport to be completed in 14 years, the $11 billion Jubail Industrial city of Saudi Arabia, and the famous trade centre of New York known as One World Centre, which is rated as the highest skyrocketed mansion in western hemisphere, amounting to about $3.8 billion and lasting 7 years to build (Newcomb, 2015). Africa infrastructure projects include: the $80 billion Inga hydroelectric dam of DRC Congo; the $12 billion Bonga South West deep-water oil project in Nigeria; the $8 billion Suez canal expansion in Egypt; the $6.5 billion Modderfontein development in South Africa and the $1 billion Al Noor Tower in Morocco. In Kenya, the infrastructure projects include; the $9.2 billion Konza technology city; the $4 billion LAPSSET corridor; the $3.8 billion Standard gauge railway; the $ 140 million Olkaria geothermal project and the $330 million Thika super highway.

Unfortunately, not all of the projects are equally successful as some of them have been exposed to formidable obstacles. Irrespective of their criticism, infrastructure projects are being regarded as being poorly designed whose performance desperately wants (Cantarelli Flyvbjerg & Buhl, 2012). They are again notorious for their failure in responding to the current commercial and societal needs which occasioned their coming to being, as well as their inadequacy in providing the functions that meet the requirements of their stakeholders, besides being a potential risk of incompetent financial performance (Locatelli & Mancini, 2010). Failure in projects is being viewed as a common and substantial deterrent. It is with this regard that it is eluded that 37% of all the projects don't succeed (Project Management Solutions, 2011). According to some other studies, these high rates of project failure are increasing alarmingly at a rate ranging between 60% and 82%.

Mendel (2012) argues that though the failure rates are high, successful infrastructure projects also exist. Beneluxlijn extension, the Rotterdam metro network, is among the preferable examples that are documented, that was completed shortly after the original schedule in this budget. Such projects give a clear indication of the possibility of promptly delivering infrastructure projects within the scope and budget. Akinyemi, Ojiako, Maguire, Steel and Anyaegbunam (2009) in their studies, observed that the adoption of good practices by governments around the world is key to success of any infrastructure project. Nevertheless, the prior conditions, potential factors and hindrances that deter timely deliverance of infrastructure projects within stipulated budget, are still under research. This presents a case to find out the causes of the effects of success of infrastructure projects in Kenya and which the researcher deems to fill in the knowledge gap. This patrician approach of filling the knowledge gap by the researcher is especially welcome in the unveiling the success formulas to the infrastructure projects which boost delivery of public services, in line with the Kenya's vision 2030, which touch on the citizens basic needs. Consequently, the need to identify potential boost for success of these infrastructure projects is therefore becoming an important issue for both research and practice.

1.2 Statement of the Problem:

Despite infrastructure projects being critical to success of any developing or developed economy, this is as well interlinked with absolutely poor format and performance delivery (Mendel 2012). They are also known for their failure to combat and come to terms with the needs in the society and its economy, which caused them. They fail to provide functionality that meet their stakeholder's requirements and are usually characterized as iconic or prestigious projects that often become expensive white elephants, requiring exorbitant post completion maintenance. Historical records suggest that many projects in Kenya have typically been conceptualized but few have barely come to completion. Currently, Kenya has a relatively high debt, whose genesis is infrastructure project development in line with vision 2030. Studies conducted by both international and local researchers have contributed to useful knowledge in infrastructure projects. Unfortunately, however, Kenya has few empirical studies that have directly analyzed the factors that influence the performance of infrastructure projects and statistics still indicate dismal and inconsistent success of infrastructure projects in the country. This necessitates a study on the determining factors for successful implementation of infrastructure projects in Kenya, with the case of LAPSSET –Lamu Port project, being the candidate in this research.

1.3 Purpose of the study:

The purpose of this study was to examine the critical success factors influencing the successful implementation of Kenya's infrastructural projects, with special reference to the LAPSSET Project, Lamu Port.

1.4 Objectives of the Study:

This study was guided by four objectives:-

i) To examine the influence of needs assessment in the successful implementation of infrastructure projects in Kenya.

ii) To assess the influence of environmental issues in the successful implementation of infrastructure projects in Kenya.

iii) To determine the influence of public participation in the successful implementation of infrastructure projects in Kenya.

iv) To establish the influence of project financing on the successful implementation of infrastructure projects in Kenya.

1.5 Research Questions

This study was guided by the following four research questions:-

i) To what extent does need assessment influence the successful implementation of infrastructure projects in Kenya?

ii) How do environmental issues influence successful implementation of infrastructure projects in Kenya?

iii) To what extent does public participation influence successful implementation of infrastructure projects in Kenya?

iv) How does project finance influence the successful implementation of infrastructure projects in Kenya?

1.6 Research Hypothesis:

The study was guided by the following hypotheses, tested at the 95% level of significance:

i) H_0: There is no significant relationship between need assessment and the successful implementation of infrastructure projects in Kenya.

H_1: There is significant relationship between need assessment and the successful implementation of infrastructure projects in Kenya.

ii) H_0: There is no significant relationship between environmental issues and the Successful implementation of infrastructure projects in Kenya.

H_1: There is significant relationship between environmental issues and the Successful implementation of infrastructure projects in Kenya.

iii) H_0: There is no significant relationship between public participation and the Successful implementation of infrastructure projects in Kenya

H_1: There is significant relationship between public participation and the successful implementation of infrastructure projects in Kenya

iv) H_0: There is no significant relationship between project finance and the successful implementation of infrastructure projects in Kenya

H_1: There is significant relationship between project finance and the successful implementation of infrastructure projects in Kenya

2. LITERATURE REVIEW

2.1 Importance of Infrastructure Projects for a Community

The essential menu that brings about a productive economy include, and is not restricted to digital communication, energy, water, transport and well strategized waste disposal facilities. Studies have proved how long term economic merits are based on infrastructure investment that is well-designed. They do so by raising enhancing growth economically as well as boosting productivity and land values besides their provision of positive spillovers. Infrastructural investment

should be done wisely, because over-investment ends up with inefficiently large projects which lower the marginal returns. It has become evident that Kenya has a poor performance based on the international standards. One of the proofs to this truth is Kenya's 98th rank in qualifying for the overall infrastructure, the analysis carried out by the World Economic Forum, during its 2012 reporting on global competitiveness. Kenya is still lagging behind in her energy and transport performance sectors. This tells a lot on how desperate the situation is on the ground with regard to underinvestment in transportation (road and sea) and annoying delay levels. These are just but a few among many others that are faced by energy sector, which in turn heightens the pressure to lower emissions of carbon which has a negative impact. Infrastructure projects are key drivers to growth in economy, employment creation besides enhancing services and marketing. Links in marine and air transport in conjunction with conducive roads, energy generation and efficient telecommunications, are so critical for efficient service provision, on which growth and expansion in business is based. When considering the key factors that causes good functionality and sustainability of societies, alongside robust of economy and other supporting systems, the level of infrastructure development will take center stage. If Kenya has had relatively high debt initiated for infrastructure project development in line with vision 2030 and if based on historical information the infrastructural development pattern has been characterized by many scandals caused by poor design leading to dwindling success rates, then more must be known about determining factors to enfranchise the modern project managers to warrant success of these infrastructure projects. Kenya has few empirical studies that have directly analyzed the factors that influence the performance of infrastructure projects. Studies conducted by both international and local researchers have contributed to useful knowledge in infrastructure projects. However, statistics still indicate dismal and inconsistent success of these infrastructure projects. This necessitates a study on the determining factors for successful implementation of infrastructure projects in Kenya, the case of LAPSSET.

2.2 Need assessment as a contributing factor to successful implementation of infrastructure:

Altschuld (2010), explains needs assessment in infrastructure projects as strategic process for ascertaining and coping with the prevailing needs, as well as bridging the gaps that disconnects desired and current conditions. The misalignment that rifts current and wanted conditions are to be ascertained for the purpose of identifying the needs. Needs are to be regarded as desires of enhancing prevailing performances, or desire to rectify deficiencies. Kaufman (2003), emphasizes on thorough assessment of the needs, ascribing it to be the main part in the process of planning, which is mostly adopted in the initiative of improving infrastructural projects. This can be so effective approach in clarifying problems and identifying appropriate interventions and solutions. Finite resources can easily be geared towards enhancing and fostering feasible and practical solutions through clear identification of the problem. Kizlik (2010), contends that the collection of relevant and adequate data will aid the processes of building up an effective product for addressing the needs and wants of a given group. Effectiveness of needs assessment in infrastructural projects will only be proven when they are seen as ends-focused for the provision of concrete proofs which can be adopted to ascertain the most effective means-to-the-ends for attaining the desired outcomes.

The quality of policy or project decisions can be improved by appropriate needs assessment, thereby improving performance and accomplishing the desired outcomes. It would be a significant and valuable initiative to improve results by moving from current to the wanted performance. Peterson (2001), observes that the needs assessment results govern the outcome decisions that incorporates implementation, design and programs/projects evaluation, leading to the achievement of desired results. For effective needs assessment, right definition of 'needs' becomes very crucial commencement state. Regardless the fact that the term 'need' is casually used in various contexts devoid of its definition, to assess them requires the term to be known as a gap in the outcome where both full and partial satisfactions are required for the attainment of another socially-permissible results that are specific. Therefore, every need has two related gaps in their results which lead to the analysis of each gap with regard to size, direction and characteristics, besides the interrelatedness within the gaps. This set apart needs assessment in contrast with surveys of favorite solutions or 'wants' of people. The existing three perspectives of need in its assessment are relative need, perceived need and expressed need. What people think about their needs defines perceived needs, which involves dynamic changes in standards among individual respondent. On the other hand, expressed needs are illustrated by the multitude of people who use circumstances to seek help and whose actions are shaped by their feelings. However, there is a significant limitation of expressed needs, which makes a general conclusion that all those who have needs are seeking help. Watkins (2012), explains that equity determine relative needs, hence should put into consideration the differences in social pathology and

population. Needs assessment have a major role in implementation of and enhancement of infrastructural projects within the framework of performance improvement. The dual aspect of assessment is their information of future decisions as well as itself being informed by the results of past decisions. Therefore, needs Assessments Bridge up both past and future performance, leading decisions throughout the improvement effort (Kaufman, 2003).

SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis is one type of extensive needs assessment in infrastructure development projects. This is the collection of information on a particular activity against the outcome of the same activity within predetermined timeframe. Once the needs are identified, they get categorized as intensive needs assessment so as to profile the identified ones in order to choose what is to be addressed. It is noteworthy to ascertain that as much as the ambition in a person may push him through his needs list, the constraints of time and money may generally inhibit the address of all needs, hence the usefulness of intensive needs assessment. Needs assessments' goal is to come up with the community's assets, with clear determination of potential concerns that confronts it (Sharma, Lanum & Saurez-Balcazar, 2000) It is during the beginning stages of infrastructural project implementation that needs assessment becomes most significant. Needs analysis is geared towards clarifying the present hindrances that inhibit success in community's program intervention, and working out possible remedies to those discrepancies. During the work of Monitoring and Evaluation (M&E), the service providers are tasked with getting various stakeholders to be well served and thoroughly assessed. According to Rossi, Lipsey & Freeman (2004), services incorporates an appraisal which is interlinked with the assessment of the current needs that aims to establish whether or not the on-going services are effective. If it is found to be ineffective, they get to identify the gaps in their subsequent implementation, besides carrying out an assessment to ascertain the likelihood of potential services to be more effective immediately after their implementation. The interlink between needs assessment, monitoring, and evaluation is highlighted by these assessments. As the tools applied by each of them get to be similar, each of them nevertheless subscribe to independent objectives and adopt skills that are unique to each other.

2.3 Environmental consideration as a factor in implementing successful infrastructure projects:

According to Eccleston (2010), infrastructural projects often attract serious environmental concerns from inception to completion. Environmental issues in infrastructure projects are detrimental in their effects as consequences of the activities of man as associated with the project on the biological and physical environment. This calls in the significance of environmental protection that needs to be an individual, organizational and governmental disciplinary practice of safeguarding the natural environment for the mutual good of man and environment. Aquirre (2002), explains that environmental and social movement (known as environmentalism), is mandated with the management of all issues with the environment through activism, advocacy and education. In order to address successfully the environmental issues, sustainable development has to be employed in infrastructure project undertakings. Sustainable development is an ever-changing procedure that empowers everyone to release their potentials and enhance their life quality in a manner that safeguards and promotes the systems on which the life on earth is supported. The amount of greenhouse gas emitted into atmosphere has alarmingly surpassed its safe levels, hence the likelihood of detrimental change in climate. We are very vulnerable in the risk of subjecting greater areas to pollution in the increase of climatic disasters. There is an alarming increase of climate-related disasters (70%) compared to the way it was (50%) two decades ago (Hitzschky, 2009).

The environmental impact assessment (EIA) is a terminology that is usually adopted when referring to project infrastructure. This EIA is defined by IAIA (International Association for Impact Assessment) as a procedure for prediction, identification, mitigation and evaluation of important proposals of development outcomes ahead of subsequent decision-making commitment initiatives. Holder (2004), further explains the uniqueness of EIA by their disregard of adherence to the environmental outcomes that are predetermined, but instead they underscore the account of decision-makers on environmental values as well as establishing justification to those decisions on the basis of analytical study of the environment and comments from the public regarding dynamism caused by the impacts of the environment. The EIA law calls into significance the completion of environmental impact assessment ahead of project construction of the infrastructure. LAPSSET is the single largest project of its kind in Eastern Africa aimed at enhancing trade and logistics within the region and its impact on the environment will certainly be expansive ranging from sea, land and air pollution. Mitigation of these effects to the environment is likely to consume resources and time which will in turn alter the time and cost of the project.

2.4 The role of Public Participation in the successful implementation of infrastructure projects:

Almond (1963), observes that public participation in infrastructure projects is the taking part in development processes by the general public directly or through their representatives. This differs with Budd (1999), whose opinion observes that it is a process which engages the general public directly in making a decision and taking public input in a way that it influences the decisions that are made. Budd further observes that the process isn't a single event , but a series of activities and actions of an institution over the life of the infrastructure project. It involves informing the public and getting an input or information from the same public. On the other hand Public Participation is described as signifying the ability of the minorities to chip in relevant ideas to authorities by other arrangement , making proposals or vetoing registration (Ghai, 2003). According to Lam (2011), Public Participation in infrastructure project as an idea is one of the principles of democracy and good governance which is recognized as a right globally because if a decision affects significant portion of the public, the public have a right to be involved in making of that decision. In this way the same public would be empowered in a significant way, therefore he views public participation both as a right and a form of empowerment to the ruled.

The US environment; protection agency defines public participation as the process that entails, getting, attending to and obtaining input from the citizens in any decision making process. This is a similar idea with the citizens in any decision making process. Canadian environmental assessment Agency (CEAA) which talks about public participation as a .process that involves public input in decision making through informing the public, inviting them to make an input and relaying back the feedback to them (Nyota, 2012). Forms of public participation according to Nyota's detailed information to the public are to make them understand issues at hand, the options and the solutions at their disposal. In addition, consultation with the public ensures constant feedback on decisions made and concerns of the public are addressed in the process. Collaborations with the same public in decision making, and placing the power to make some critical decision through allowing some consultation from the same public is a form of public empowerment in infrastructure projects.

According to John Budd (1999), the benefits of public participation include sustainable development through the involvement of all the stakeholders, reduced conflicts and those that occur are easily managed. It ensures that projects are easily understood and opposition of the said projects are drastically reduced. It ensures economic benefits and reduction of costs and time; citizens' concerns are addressed in the formative stages of the planning process and for the effective use of the available data; consultation in any public participation forum is an opportunity to seek the hidden knowledge of the wider community and their key concerns.

Lam, Kairu and Maneno, (2012), concluded that in essence public participation enables a balance between governing the people and governing with the people. They argue that the fundamental aspects of public participation are the promotion of credibility and integrity in public institution and which in turn help to build public confidence and diffuse some sense of impartiality in contested issues. Public Participation can only be achieved if there are procedures of mechanisms designed to achieve it. According to Sihanya (2013), public participation in infrastructure project implementation includes the power to advice or to be considered, before administrative conduct maybe regarded as legitimate or valid. Sihanya's article discusses the juridical basis of the concert of public participation in Kenya. It is useful for this study because it is in structure as to what may secure public participation. Tom Atlee (2012), observes that public participation demands that the recipients of the decisions or those affected in one way or another by the decisions have a right to have their say in the decision making process. It operates in a way that factors in the ideas of the affected groups and offers sufficient information about the issues at hand to the affected groups before the decisions are made at the end of all, it gets back to the same public or the affected groups and demonstrates to them on how their ideas influenced the decisions that were made.

2.5 Project financing model and its role in the implementation of successful infrastructural projects:

Beale (2002), defines financing of projects as a specialized structure of availing funds based on the projected cash flow of projects as the basic repayment source, while holding the assets of the same projects, interests and rights as collateral security. The alternative terminology of the same is limited/none financial recourse, understood as extreme limitations of leaders to the shareholders or sponsors of the company in custody of the project, responsible for loan repayment. De Lemos (2003) observes that since the ultimate objective of project financing is financing the project, then it must be

adopted by infrastructural project sponsors during financial need as the project picks up. Consideration must be given to the main aspects of project financing during the development of infrastructural project case. Functions of project finance are the provision of finance over long period of time to industrial projects and infrastructure on full dependence to the project's cash flow which is projected, instead of depending on their sponsors' balance sheets. The structure of project financing is, in most cases, a cooperation of several equity investors termed as sponsors, in the form of a bank or any other institution providing loans towards the progress of a given operation. Their security is the asset of the financed project and their payment is derived from the cash flow of the project without interfering with the general assets or creditworthiness of the project sponsors. This decision is partially supported by financial modeling (Ahmad, 2008).

Each model in project financing has its distinct finance cost and risk in the project, thereby causing the project financing to have an indirect impact on the final results of the project. According to De Lemos (2003), several equity investors are involved in the structure of project financing, in addition to bank syndicates and other loaning institutions. According to Klompjan (2002), the structure of project finance enhances the public sector with the ability to efficiently manage the backlogs in its infrastructure as they partner with the private sector. The aims of financiers and the attributes of the financial instruments have a synergy relationship. The objective of project finance is to establish the project and making it independent from its sponsor's balance sheet. This will enable the repayment of the required funds to come exclusively from project revenue.

2.6 Theoretical Framework:

The three theories analyzed in this chapter are the social dialectal theory, resource-based theory or view (RBV) and the principal-agent theory. They all look at different areas that influence implementation the rationale for the contracts in infrastructure projects.

2.6.1 The Social Dialectical Theory:

Poole (1995), argues that the theory of social dialectical alludes that the existence of project aspect is in multiple sphere of conflicting matters and controversial attributes that rival each other for dominance. Such antagonism is bound to be internal to an institutional parameters which may have various rivalries in their aspirations or the competition of various sub-sections of same for priority. However, such antagonisms are as well likely to be superficial in their effect. The terms given to such conflicts are thesis and antithesis. Procurement policies are drafted amidst numerous theses and the antithesis. This theory shall be used to inform how project need assessment and can be addressed and positively influence the performance of infrastructure projects.

This theory was used to explain the conflicting views about the project while undertaking public participation. It is the same theory also which can highlight the different views expressed in the environment issues. There are people who will be affected by disturbing certain environmental ecologies due to the project and some who will benefit from the project. These conflicting issues can be explained by this theory.

2.6.2 Resource-Based Theory or View (RBV):

This theory was coined 1984 by Birge Wenefeldt and does the analyzing and identifying the strategic advantages which infrastructure project has owing to the scrutinization of its collective assets and various capacities in its custody as a project. The bottom-line RBV's is that there is magnitudinal differences among projects as they each possess different attributes of their capacities and capabilities. Every infrastructure project takes the initiative to establish itself from the available resources, so as to become the source of its own advantage (Pearce & Robinson, 2007). In the case of this study, the government and financiers have resources that all determine the implementation of these partnerships but at different levels that are not harmonized to be a reason for delay in implementation of the infrastructure project. This theory helped the researcher to anchor the research of the financial models to be used in the project.

2.6.3 Principal-Agent Theory:

In infrastructure projects, there is a variation in the interests of the donor (the principal) and the recipient government (the agent). The dilemma in the theory is how to get the agent to act in the best interests of the principal or how to get the agent to have the maximum contractual relationship with the principal through optimal project performance. To attain a

superior output, the problems of information asymmetry and goal inconsistence that may emerge from this contractual relationship should have to be minimized (Judge& Müller, 2005). The problem of information asymmetry might appear from the contractual relationship between the principal and the agent because the agent has not been given enough information on the principal's expectations; and the agent receives different signals from multiple principals, which then leads to ambiguity (Verhoest, 2005). Various undisclosed factors can be accredited to the principal-agent problem. Apart from information asymmetry and goal incongruence, the present study conceptualizes physical infrastructure, technology, procurement policy rand personnel training as also key factors that may determine the principal-agent contractual relationship with respect to meeting project performance goals. Adverse selection and moral hazard are critical problems the principal might then be confronted with (Wright, 1987). Adverse selection refers to the distortion of ability by the agent. It might be difficult for the principal to know whether an agent really has the skills or abilities to accomplish these activities if the principal has to select an agent for delegating activities to him. As a result, the principal may select under qualified agents. Moral hazard is another drawback to the principal. Moral hazard involves lack of effort on part of the agent: the agent deliberately engages in selfish activities to the impairment of the principal. The agent doesn't put forth the agreed effort, he is evading. These problems in the principal-association may mitigated by three kinds of mechanisms: monitoring or closely controlling of agents by principals, bonding or having ex ante guarantees of compliance by the agent, and incentives and risk sharing (the risk-averse agent 'buys' insurance from the less risk-averse principal to avoid efficiency loss and discouragement) (Kwak, 2002). This theory was used to anchor both aspects of public participation and financial model of the project. It also touches on the need analysis aspect because the donor (the principal) usual is attracted to projects with high demand and necessary for the community.

2.7 Conceptual Framework:

This study aimed at establishing the influence of needs assessment, environmental issues; public participation and project financing in the successful implementation of infrastructure projects. This determination was found to be significant and critical in influencing the successful implementation of infrastructure projects. Political stability and donor participation are also considered to play a significant role in the successful implementation of infrastructure projects in Kenya.

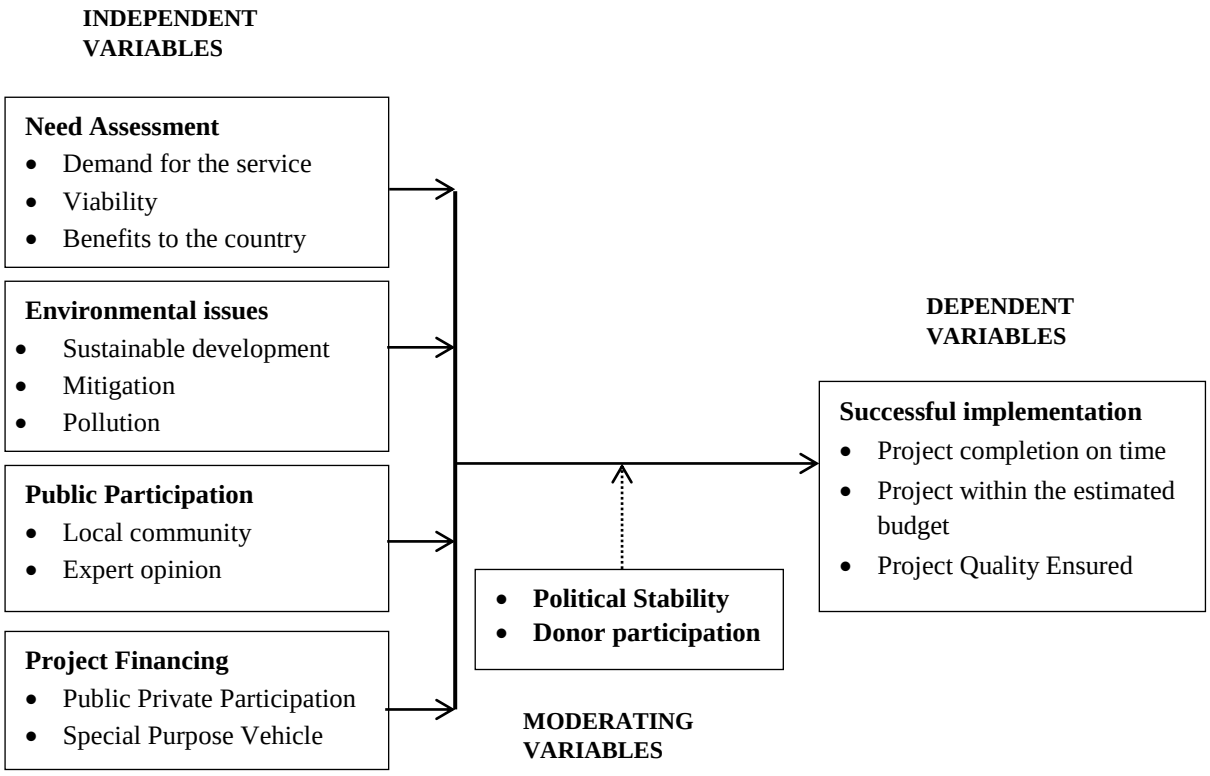

Figure 1: Conceptual Framework

Novelty Journals

ISSN 2394-9694

International Journal of Novel Research in Humanity and Social Sciences
Vol. 5, Issue 5, pp: (196-214), Month: September - October 2018, Available at: www.noveltyjournals.com

3. RESEARCH METHODOLOGY

3.1 Research Design:

Research design refers to how the researcher put a research study together to answer a set of questions. The research design is based on a strategic combination of methods to be applied to address the objectives of the thesis. Both quantitative and qualitative analysis research designs were incorporated. Data specific to the LAPSSET infrastructure project is to be used to gain a representation of factors occurring in the field. This study applied descriptive survey design. Descriptive research design is a scientific method which involves observing and describing the behavior of a subject without influencing it in any way (Shuttleworth 2008). Descriptive research was appropriate in this study since it can demonstrate the existence of success indicators in the project and can challenge accepted assumptions about the way things are and can provoke action. This design is considered as most appropriate as well for purposes of determination of relationship between the variables.

3.2 Target Population:

Quinlan (2011) defines target population as all individuals, items or units relevant to the study. This study comprises Port experts including; directors, engineers, project managers, project funders, environmentalists, the transport ministry, the local governments and the citizens in the affected areas in Lamu county. These populations were selected to capture perspectives from individuals with different experiences in the project. There project covers an estimate of 285 people in the affected areas and fields of the infrastructure project.

Table 3.1: Target Population Distribution

Designation	Number
Governor's office	3
Ministry of Transport	2
Kenya Ports Authority	2
National Lands Commission	2
National Treasury	2
LAPSSET development Committee	7
Ministry of Lands, Housing and Urban Planning	1
Non-Governmental Organizations	3
Community Based Organizations	3
Infrastructure project affected Residents	260
TOTAL	**285**

3.3 Sample Size and Sampling Procedure:

Under this section, the method used to determine the sample size from the target population and from which data collected was presented. Further this section describes the sampling techniques used in selecting individuals to be included as the subjects of the study sample.

3.3.1 Sample Size:

A sample in research study is a group on which information is gathered (Frankel 2000). The whole idea of sampling is that by selecting some of the elements of a population we can draw conclusion about the entire population (Cooper 2006). The sample for this study comprised of 75 respondents. The study sample size was calculated using Yamane formula (1967). In this formula, sample size can be calculated at 3%, 5%, 7% and 10% precision (e) levels. Confidence level used is 95% with degree of variability (p) equivalent to 50% (0.5).

$$n= \frac{N}{1+Ne^2}$$

Where n= sample size,

N= study population (285)

e = margin error of 10%

In the proposed study, the sample size was calculated at precision level of 10% (e = 0.1) and therefore a confidence level of 90%.

Hence sample size in this study is 75.

Table 3.2: Sample Size

Designation	Population	Sample size
Governor's office	3	2
Ministry of Transport	2	2
Kenya Ports Authority	2	2
National Lands Commission	2	2
National Treasury	2	2
LAPSSET development Committee	7	4
Ministry of Lands, Housing and Urban Planning	1	1
Non-Governmental Organizations	3	3
Community Based Organizations	3	3
Infrastructure project affected Residents	260	54
TOTAL	**285**	**75**

3.3.2 Sampling Procedure:

Stratified random sampling was used in this research. The respondents were arranged into strata corresponding to their areas of concern in this research. For example, project affected people, the County Government, the LAPSSET Authority and so on. This helped to get the wider scope of the information required for this research.

Stratified random sampling is a probability sampling technique wherein the researcher divides the entire population into different sub-groups or strata, then randomly selects the final subjects proportionally from the different strata. In addition the researcher used his discretion to determine whether respondents would have relevant knowledge for the research. Such personnel were interviewed by the researcher by use of a questionnaire.

3.4 Data Collection Instruments:

Carroll (2011) defines data collection instruments as the tools able to measure the variables in the research questions. Limitations to the data mean that it is necessary to confirm and extend the findings with data specific to the LAPSSET infrastructure project to achieve the research objectives. The researcher use a standard questionnaire designed to fit a certain inquiry from the respondents.

3.4.1 Pilot Study:

A survey questionnaire was administered to all the respondents as sample from the target population of the LAPSSET infrastructure project. The questionnaire contains both closed and open ended questions so as to engage the respondents to give in-depth information where necessary. This instrument is considered to be relatively time friendly and cost effective for the purpose of this study. The data generated regarding factor relationships contributed to hypothesis generation for future studies. The questionnaire was pilot tested to some selected respondents representing diverse sections of the LAPSSET infrastructure project among the sample group with the outcome being used to improve it by ensuring the data obtained is sufficient to the subjects.

3.4.2 Validity Research Instruments:

Content validity of a measuring instrument is the extent to which it provides adequate coverage of the investigative questions guiding the study (Reichardt and Cook, 1997). The researcher found it necessary to test the content validity of the research instruments to ascertain whether all the areas that is critical for this study was included in the research instrument. According to Connelly (2008), extant literature suggests that a pilot study sample should be 10% of the sample projected for the larger parent study. The questionnaire was pilot tested with 8 or the respondents which constitute 10 % of the sample size among the sample population, with the outcome being used to improve it by ensuring the data obtained was sufficient to the subjects. Orodho (2004).

Novelty Journals

ISSN 2394-9694

International Journal of Novel Research in Humanity and Social Sciences
Vol. 5, Issue 5, pp: (196-214), Month: September - October 2018, Available at: www.noveltyjournals.com

3.4.3 Reliability Research Instruments:

Phelan (2005) defines reliability as the degree to which an assessment tool produces stable and consistent results. It is defined as a characteristic of an instrument that reflects the degree to which the instrument provokes consistent responses. According to Mugenda and Mugenda (2003) a coefficient of 0.7 or more is considered reliable. In this case, a value of .78 was obtained and this allowed reliability to be accepted.

3.5 Data Collection Procedures:

After the professional and technical guidance on the preparation of project research by the supervisor, the researcher intends to present the report to the panelist appointed by the University of Nairobi for examination and approval. The researcher then sought relevant authorization documents and proceeds to the field for data collection putting into consideration ethical principles and the bill of rights in the constitution. The data obtained was summarized, analyzed and inferences drawn from the findings and a report prepared with the help of the supervisor before a final presentation to the defense panel at the university.

3.6 Data Analysis Technique:

Orodho (2002) defines data analysis as the examination of what has been collected in a survey or experiment and making deductions and inferences from this data thorough organizing the data, breaking it into manageable units, synthesizing it as well as searching for patterns.

After the questionnaires were returned, the raw data collected was cleaned, edited, coded and tabulated in line with the study objectives. The quantitative data collected using the closed ended items of the questionnaire was assigned ordinal values and analyzed using statistics of frequency tables, percentages, mode and median. The organized data was then used in testing of hypotheses of the study. Hypotheses testing was done using chi square test. Chi square test was used since the result was be non-parametric and would give a much more holistic association of the human performance variables with performance.

4. PRESENTATION OF FINDINGS, ANALYSIS AND INTERPRETATION

4.1 Need assessment on successful implementation of infrastructure projects:

The fourth objective was to determine the influence of need assessment on the successful implementation of infrastructure projects in Lamu.

Table 4.1: Need Assessment and Implementation of Infrastructure Projects

Rating on effect of need assessment	Frequency	Percent
Very often	35	47%
Often	26	34%
Sometimes	9	12%
Rarely	3	4%
Very rarely	2	3%
Total	**75**	**100%**

35(47%) of the respondents were of the opinion that need assessment very often affect the implementation of infrastructural projects in Lamu. 26(34%) of the respondents were of the opinion that need assessment has often affected the need assessment has often affect the implementation of infrastructural projects. 9(12%) were of the opinion that need assessment sometimes affect the implementation of infrastructural projects. 3(12%) were of the opinion that need assessment rarely affect the implementation of infrastructural projects.2(3%) were of the opinion that need assessment very rarely affect the implementation of infrastructural projects. From the above information, majority of the respondents tend to be of the opinion that need assessment affected the implementation of infrastructure projects in Lamu. Frequency of occurrence ranked 1-5 (5 being very often) the mean was found to be 4.1867 and standard deviation 0.9518

Novelty Journals

ISSN 2394-9694

International Journal of Novel Research in Humanity and Social Sciences
Vol. 5, Issue 5, pp: (196-214), Month: September - October 2018, Available at: www.noveltyjournals.com

Using chi square testing to test the hypothesis;

H_4 There is a relationship between need assessment and the successful implementation of infrastructure projects in Lamu

$$\chi^2 = \sum \frac{(O-E)^2}{E}$$

Likert scale	1	2	3	4	5
Observed (O)	2	3	9	26	35
Expected (E)	15	15	15	15	15

χ_c^2=58 > $\chi_{\alpha\ 0.05}^2$=9.488 at 4 degrees of freedom and 95% level of significance

We accept the alternative hypothesis that there is relationship between need assessment and the successful implementation of infrastructure projects in Lamu.

4.2 Environmental issues on successful implementation of infrastructure projects:

The third objective was to determine the influence of environmental issues on successful implementation of infrastructure projects.

Table 4.2: Environmental issues on successful implementation of infrastructure projects

Rating on effect of environmental issues	Frequency	Percent
Very often	15	20%
Often	19	25%
Sometimes	24	32%
Rarely	13	17%
Very rarely	4	6%
Total	**75**	**100%**

15(20%) of the respondents were of the opinion that environmental issues very often affect the successful implementation of infrastructure project in Lamu. 19(25%) of the respondents were of the opinion that environmental issues often affect the successful implementation of infrastructure project in Lamu. 24(32%) were of the opinion that environmental issues sometimes affect the successful implementation of infrastructure project in Lamu. 13(17%) were of the opinion that environmental issues rarely affect the successful implementation of infrastructure project in Lamu and 4(6%) were for the opinion that environmental issues very rarely affect the successful implementation of infrastructure project in Lamu. From the above information, more people tend to agree that environmental issues affect the successful implementation of infrastructure project in Lamu. Frequency of occurrence ranked 1-5 (5 being very often) the mean was found to be 3.373 and standard deviation 1.14.

Using chi square testing to test the hypothesis;

There is a significant relationship between environmental issues and the successful implementation of infrastructure projects.

$$\chi^2 = \sum \frac{(O-E)^2}{E}$$

Likert scale	1	2	3	4	5
Observed (O)	4	13	24	19	15
Expected (E)	15	15	15	15	15

χ_c^2=14.8 > $\chi_{\alpha\ 0.05}^2$=9.488 at 4 degrees of freedom and 95% level of significance

We accept the alternative hypothesis in that there is a relationship between environmental issues and the successful implementation of infrastructure projects.

Novelty Journals

ISSN 2394-9694

International Journal of Novel Research in Humanity and Social Sciences
Vol. 5, Issue 5, pp: (196-214), Month: September - October 2018, Available at: www.noveltyjournals.com

4.3 Public participation on the successful implementation of infrastructure projects:

The first objective was to determine the effect of public participation on the successful implementation of infrastructure projects.

Table 4.3: Public Participation and implementation of infrastructure projects

Rating on effect of Public Participation	Frequency	Percent
Very often	55	74%
Often	16	21%
Sometimes	2	3%
Rarely	1	2%
Very rarely	1	2%
Total	**75**	**100%**

Majority of the respondents, 55(74%) were of the opinion that public participation very often affect the successful implementation of infrastructure project in Lamu. 16(22%) of the respondents were of the opinion that public participation often affect the successful implementation of infrastructure project in Lamu. 2(3%) were of the opinion that public participation sometimes affected the successful implementation of infrastructure project in Lamu. Only 1(2%) were of the opinion that public participation rarely and very rarely affected the successful implementation of infrastructure project in Lamu. From the above information, it is clear according to the opinion of majority that public participation very often affected the successful implementation of infrastructure project in Lamu. Rating of occurrence ranked 1-5 (5 being very often) the mean was found to be 4.64 and standard deviation 0.7237.

Using chi square testing to test the hypothesis;

There is a significant relationship between public participation and the successful implementation of infrastructure projects

$$\chi^2 = \sum \frac{(O-E)^2}{E}$$

Likert scale	1	2	3	4	5
Observed (O)	1	1	2	16	55
Expected (E)	15	15	15	15	15

χ_c^2=119.133 >$\chi_{\alpha\ 0.05}^2$=9.488 at 4 degrees of freedom and 95% level of significance

We accept the alternative hypothesis in that there is a relationship between public participation and the successful implementation of infrastructure projects

4.4 Project financing on successful implementation of infrastructural projects:

The second objective was to determine the effect of project financing on the successful implementation of infrastructure projects.

Table 4.4: Project financing on successful implementation of infrastructural projects

Rating on effect of project financing	Frequency	Percent
Very often	70	93%
Often	5	7%
Sometimes	0	0%
Rarely	0	0%
Very rarely	0	0%
Total	**75**	**100%**

Majority of the respondents were of the opinion that project finance very often affected the successful implementation of infrastructural projects 70(93%) with only 5(7%) of the respondents being of the opinion that project finance often affects the successful implementation of infrastructural projects. None of the respondents was for the opinion that project finance

Novelty Journals

ISSN 2394-9694

International Journal of Novel Research in Humanity and Social Sciences
Vol. 5, Issue 5, pp: (196-214), Month: September - October 2018, Available at: www.noveltyjournals.com

sometimes, rarely or very rarely affected the successful implementation of infrastructural projects. From the above information, the respondents agreed that project finance affects the successful implementation of infrastructural projects. Frequency of occurrence ranked 1-5 (5 being very often) the mean was found to be 4.933 and standard deviation 0.2494.

Using chi square testing to test the hypothesis;

There is a relationship between project finance and the successful implementation of infrastructure projects

$$\chi^2 = \sum \frac{(O-E)^2}{E}$$

Likert scale	1	2	3	4	5
Observed (O)	0	0	0	5	70
Expected (E)	15	15	15	15	15

x_c^2=253.33>$x_{\alpha\ 0.05}^2$=9.488 at 4 degrees of freedom and 95% level of significance

We accept the alternative hypothesis in that there is a relationship between project finance and the successful implementation of infrastructure projects.

Table 4.5: Summary of Mean, Standard deviation, chi square critical and chi square observed at 4 degrees of freedom computed for the variables.

Factors	Mean	SD	x_c^2	$x_{\alpha\ 0.05}^2$
Public participation	4.64	0.7237	119.133	9.488
Project finance	4.933	0.2494	253.33	9.488
Environmental issues	3.373	1.14	14.8	9.488
Need assessment	4.1867	0.9518	58	9.488

The range of means was calculated from 3.373 to 4.933 indicating a general high value response in the Likert scale. Data were further analyzed with non-parametric statistics, Chi square test which revealed homogeneity of response of the respondents thereby implicating that there is a relationship between the variables and successful implementation of infrastructure projects.

5. SUMMARY OF FINDINGS, DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary of Findings:

This section presents the findings from the study on the determinants of successful implementation of infrastructure projects in Kenya, case of LAPSSET project Lamu Port. It was established that all the factors influenced the implementation of infrastructure projects in Kenya and that this influence was statistically significant at 95% level of significance and 4 degrees of freedom.

The study established that 35(47%) of the respondents were of the opinion that need assessment very often affect the implementation of infrastructural projects in Lamu. 26(34%) of the respondents were of the opinion that need assessment has often affected the implementation of infrastructural projects. 9(12%) were of the opinion that need assessment sometimes affect the implementation of infrastructural projects. 3(4%) were of the opinion that need assessment rarely affect the implementation of infrastructural projects. 2(3%) were of the opinion that need assessment very rarely affect the implementation of infrastructural projects. From the above information, majority of the respondents tend to be of the opinion that need assessment affected the implementation of infrastructure projects in Lamu. Frequency of occurrence ranked 1-5 (5 being very often) the mean was found to be 4.1867 and standard deviation 0.9518.

The study established that there exists a significant relationship between public participation and the successful implementation of infrastructure projects with a chi square test value of x_c^2=58 > $x_{\alpha\ 0.05}^2$ =9.488 at 4 degrees of freedom and 95% level of significance.

The study established that 15(20%) of the respondents were of the opinion that environmental issues very often affect the successful implementation of infrastructure project in Lamu. 19(25%) of the respondents were of the opinion that environmental issues often affect the "successful implementation of infrastructure project in Lamu. 24(32%) were of the opinion that environmental issues sometimes affect the successful implementation of infrastructure project in Lamu. 13(17%) were of the opinion that environmental issues rarely affect the successful implementation of infrastructure project in Lamu and 4(6%) were for the opinion that environmental issues very rarely affect the successful implementation of infrastructure project in Lamu. From the above information, more residents of Lamu tend to agree that environmental issues affect the successful implementation of infrastructure project in Lamu. Frequency of occurrence ranked 1-5 (5 being very often) the mean was found to be 3.373 and standard deviation 1.14.

The study established that there exists a significant relationship between environmental issues and the successful implementation of infrastructure projects with a chi square test value of x_c^2=14.8 > $x_{\alpha\ 0.05}^2$ =9.488 at 4 degrees of freedom and 95% level of significance.

The study established that majority of the respondents, 55(74%) were of the opinion that public participation very often affect the successful implementation of infrastructure project in Lamu. 16(22%) of the respondents were of the opinion that public participation often affect the successful implementation of infrastructure project in Lamu. 2(3%) were of the opinion that public participation sometimes affected the successful implementation of infrastructure project in Lamu. Only 1(2%) were of the opinion that public participation rarely and very rarely affected the successful implementation of infrastructure project in Lamu. From the above information, it is clear according to the opinion of majority that public participation very often affected the successful implementation of infrastructure project in "Lamu. Rating of occurrence ranked 1-5 (5 being very often) the mean was found to be 4.64 and standard deviation 0.7237.

The study established that there exists a significant relationship between public participation and the successful implementation of infrastructure projects with a chi square test value of x_c^2=119.133 > $x_{\alpha\ 0.05}^2$ =9.488, at 4 degrees of freedom and 95% level of significance.

The study established that majority of the respondents were of the opinion that project finance very often affected the successful implementation of infrastructural projects 70(93%) with only 5(7%) of the respondents being of the opinion that project finance often affects the successful implementation of infrastructural projects. None of the respondents was for the opinion that project finance sometimes, rarely or very rarely affected the successful implementation of infrastructural projects. From the above information, the respondents agreed that project finance affects the successful implementation of infrastructural projects. Frequency of occurrence ranked 1-5 (5 being very often) the mean was found to be 4.933 and standard deviation 0.2494.

The study established that there exists a significant relationship between environmental issues and the successful implementation of infrastructure projects with a chi square test value of x_c^2=253.33 > $x_{\alpha\ 0.05}^2$ =9.488 at 4 degrees of freedom and 95% level of significance.

5.2 Discussions:

This research project had four parameters or variables to test on their role and effectiveness on the successful implementation of infrastructure projects in Kenya. The four variables were the need assessment, environmental issues, public participation and financing model for the project.

The results of the research for the first variable showed that majority of the respondents were of the view that need assessment highly affects the implementation of the infrastructure projects. About 81% percent of the respondents agreed that need assessment is a significant factor of infrastructure projects. This coincides with the view of Altschuld (2010), who alluded that needs assessment in infrastructure projects is a strategic process for ascertaining and coping with the prevailing needs carrying needs assessment gives direction of the project and builds confidence in its implantation. As Peterson results govern the outcome decision which incorporates among other things implementation of projects. The results of this research project agree with the views of Peterson (2001) on the need assessment.

With the second variables on environmental issues, the results revealed that only 45% wrongly felt that environmental issues affects the successful implementation of the project 23% had a lower view that environmental issues can affect the

successful implementation of infrastructure projects. About 32% thought that environmental issues sometimes affect the successful implementation of these infrastructure projects. This result reveals the responses had also a bearing on the level of education. Since most of those sampled for research constituted the project affected people who were 54 out of 75 they may not be fully aware of the effects of environmental issues emanating from this. 77% of the respondents only reached Secondary Education and thus this factor may have constituted to their responses which were "not as high as expected on new projects. This was not in total agreement with the concern of Eccleston (2010). Who observed that infrastructural projects often attract serious environmental issues.

However, acquire (2000), explained that environmental ism needed activism, advocacy and education. His opinion can explain why only 45% of the respondents did have a strong feeling on environmental implementation of the project. This may be due to the low level of activism, advocacy and education. However, generally fairly higher percentage of people regarded environmental issues had an impact and can determine the successful implementation of the project.

The results of the third independent variable which was the effect of public participation on the successful implementation of infrastructure projects showed overwhelming majority of about 95% concurring that public participation had great effect and influence on the successful implementation of the infrastructural projects. The results support the observation by John Budd (1999) who emphasized in the practice of public participation in infrastructure projects so as to reduce conflicts and opposition of the project. It ensures economic benefits and reduction of costs and time.

The last variable was to determine whether the financing model of project had an influence impact on the successful implementation of the mega projects. The result from the s showed that almost 100% of the respondents had an opinion that financing had direct influence and actually determines the successful implementation of the .infrastructure projects. The results concur with Klompjan (2002), who observed that the structure of project finance enhances the public sector.

The overwhelming response shows the need of a proper financing model for the infrastructure projects as they involve heavy investments with enormous costs, therefore, it is not a surprise to see that the financing model will tend to be a very strong determinant in the successful implementation of the infrastructure projects.

5.3 Conclusions:

The ever growing need for transport infrastructure in the Kenyan transport industry and forecasts of continued growth of import and export in the shipping industry into the next decade in line with vision 2030 put a strain on Kenyan transport capacity. French carrier CMA COM, which has a strong presence in Africa shipping business reveal a growing need for increment in port capacity in the East Africa region, being an important trans-shipment hub for North-South shipments. International Transport Association, in addition predicts an average annual traffic growth rate of 5.0% during the next 20 years in the shipping industry. The research presented in this study addresses long standing research gaps within success literature in relation to implementation of infrastructural project of LAPSSET. This research therefore provides a foundation from which to develop an ecologically valid and comprehensive understanding of determinant factors and associated implications for success in the implementation of infrastructure projects. This research has also achieved the understanding of some of key areas the LAPPSET needs to focus on in its implementation to assure its success. All the four variables tested in this research revealed that they are key factors and determinants for the success in implementing infrastructural projects in Kenya. The variables are need assessment, "environmental issues, public participation and project financing models. Project planners and managers, therefore, should be compelled to keenly observe and consider seriously the four factors which will lead to the success of mega projects in an effort to realize and actualize the intended objectives and the goals of the projects.

5.4 Recommendations:

The study has revealed the factors determining the successful implementation of infrastructure projects. In order to avail adequate enabling environment to facilitate proper implementation of infrastructural projects systems need to be developed with a view to regulate the need assessment, public participation, environmental consideration and project financing. These may be developed by governmental institutions, non-governmental institutions, and sometimes in collaboration with academia. Technology is usually the most crucial factor determining governmental and multi governmental project performance. In this regard, the research project recommends the adoption of more advanced technology to help track the adherence to the independent variables aforementioned not only in basic adherence to

regulations and laws but also provide complex information systems such as point to point and comprehensive areas in the projects where the independent variables may be affected including multi-functional indications that can easily generate information necessary to make decisions to improve the mentioned independent variables among others.

Effectiveness of needs assessment in infrastructural projects will only be proven when they are seen as ends-focused for the provision of concrete proofs which can be adopted to ascertain the most effective means-to-the-ends for attaining the desired outcomes. The quality of policy or project decisions can be improved by appropriate needs assessment, thereby improving performance and accomplishing the desired outcomes. It would be a significant and valuable initiative to improve results by moving from current to the wanted performance levels.

Environmental protection needs to be an individual, organizational and governmental disciplinary practice of safeguarding the natural environment for the mutual good of man and environment in the implementation of the LAPSSET project. The project manager should carry out sensitization to all stakeholders in addressing the issue of environmental protection and to follow up during all phases of the project. In addition the project manager should work hand in hand with the environmental authorities in seeing in to it that matters pertaining to environment are properly addressed in accordance with existing laws.

In addressing public participation, collaborations with the same public in decision making, and placing the power to make some critical decision through allowing some consultation from the same public should be encouraged during all phases of the project infrastructure projects. This research project recommends that this should take place through public representatives, governmental and non-governmental institutions in order to ensure sustainable development.

This research project recommends specialized structure of availing funds based on the projected cash flow of projects. Since project financing is a critical variable on the implementation of infrastructural projects, the researcher recommends several equity investors be involved in the structure of project financing, in addition to bank syndicates and other loaning institutions. This should be done to avoid stalling of the project once already commenced. The project finance personnel/team are also crucial determinant in the success thereof. Adequate training and development is therefore crucial on matters relating to finance concepts based on the infrastructural project needs.

REFERENCES

[1] Agirirre, M. (2002). *Sustainable Development: Why the Focus on Population? International Journal of Social Economics*, 29, 923-945.

[2] Ahmad, S. (2008). *Project Finance. Pakistan Banks Association*, Online Digest.

[3] Altschuld, J. W. (2010). *Needs Assessment: An Overview.* Thousand Oaks. Sage.

[4] Ashby, M. (2015). *Background, in: Materials and Sustainable Development.* Elsevier.

[5] Atlee, T. (2012). *Empowering public Wisdom: A practical Vision of Citizen*- Led Politics. Berkeley: Amazon.com.

[6] Bailey, L. L. (2000). *The effects of performance feedback on air traffic control team coordination.* Oklahoma: Civil Aeromedical Institute.

[7] Beale, G. C. (2002). *Credit Attributes of Project Finance Structured & Project Finance.*

[8] Carroll, S. (2011). *Choices for your data collection instruments.* Cook, R. a. (1997), *Validity in Qualitative Research.*

[9] Daniel, S. T. (2004). *Aggregating and evaluating the results of different Environmental Impact Assessment methods Ecological indicators.*

[10] De Lemos, T. B. (2003). *The Nature of PFI.* Structured & Project Finance.

[11] Eaton, D. a. (2002). PFI/DBFO: *Roads to the Future?* Do PFI/DBFO Schemes Provide Acceptable Risk Transfer? Structured & Project Finance.

[12] Eccleston, C. H. (2010). *Global Environmental Policy.* Concepts. Principles, and Practice.

[13] Esty, B. (2002). *The Economic Motivations for Using Project Finance.* Harvard Business School.

[14] Flyvbjerg, B. (2009). *Research on Mega Projects.* University of Oxford.

[15] Fulgham, S. M. (2008). Q & A with Ed Tech Leaders: *Interview with Roger Kaufman. Educational Technology.* Thousand Oaks: Sage. (pp. pp. 49-52).

[16] Gibson, W. H. (2006). *A taxonomy of human communication errors and application to railway track maintenance.*

[17] Glaser, D. N. (1999). *Workload and social support:* Effects on performance and stress. Human performance.

[18] Hitzschky, K. *&. (2009). *A proposed impact assessment method for genetically modified plants (As-GMP method) Environmental Impact Assessment review,*

[19] Hoffman, S. (2007). *The Law & Business of International Project Finance.* Cambridge University Press.

[20] Holder, J. (2004). *Environmental Assessment: The Regulation of Decision Making,.* New York: Oxford University Press.

[21] Hollenbeck, J. R. (1995), *Team performance on monitoring tasks: An examination of Decision errors in contexts requiring sustained attention.* Journal of Applied Psychology, 89(6), 685-696.

[22] Huttunen, K. K. (2011). *Effect of cognitive load on speech prosody in aviation:* Evidence from military Simulator flights.

[23] Kaufman, R, A. (2003). *Needs Assessment: A User's Guide.* Englewood Cliffs. New Jersey: Educational Technology Publications.

[24] Kizlik, B. (2010). *Needs Assessment Information on Infrastructural Projects.* Klompjan, R. a. (2002). *Default Risk in Project Finance.* Structured & Project Finance.

[25] Logan, T.-M. (2003). *Optimal Debt Capacity for BOT Projects in Emerging Economies.* Structured & Project Finance.

[26] Mugenda, 0. a. (2003). *Research Methods, Quantitative & Qualitative Approaches.* Nairobi.

[27] Neuparie, L. (2012.). *Project Finance Cross-Border Risks in Nepal".* . Neupane Law Associates.

[28] Parkin, S. (2000). *Sustainable Development: The Concept and the Practical Challenge.* Proceedings of the Institution of Civil Engineers.

[29] Peterson, D. J. (2001). *Needs Assessment in Public Health: A Practical Guide for Students and Professionals.* Hingham MA, USA: Kluwer Academic Publishers.

[30] R.O., R, (1996). *Basic Flight Physiology (2nd Ed.).* . New York, USA: McGraw-Hill.

[31] Reichardt, C. (1997). *Validity in Qualitative Research.*

[32] Raster, J. (2006). *Mitigating Commercial Risks in Project Finance.* Public Policy for the Private Sector, the World Bank.

[33] Salas, E. P. (1995). *Situation awareness in team performance'.* Implications for measurement and training. Implications for measurement and, 123-136.

[34] Schroeder, D. J. (1993). *An examination of the workload conditions associated -with operational, errors/deviations at air route traffic control centers.* Washington, DC: Federal Aviation Administration Office of Aerospace Medicine.

[35] Shuttleworth, M. (2008). *Descriptive Research Design.*

[36] Sorge, M. (2004,). *The nature of credit risk in project finance.* BIS Quarterly Review, December, p. *91:-*

[37] Stangor, C. (2004). *Research Methods for the Behavioral Sciences,*

[38] Steinberg, R. (2009). *Cognitive Psychology. :*. Belmont: CA: Wadworth Cengage Learning.

[39] Watkins, R. W. (2012). *A Guide to Assessing Needs:* Tools for collecting information, Making decisions, and achieving development results. Washington, DC: World Bank.p, 5.

[40] Wilson, L. (2008). .4 *Practical Method for Environmental Impact Assessment Audits Environ Impact Assess Rev.*

[41] Worenklein., J. (2003). *The Global Crises in Power and Infrastructure: Lessons Learned and New Directions.* Institutional Investor.

[42] World Commission on Environment and Development. (2007). Oxford: *Our Common Future.* Oxford University Press.