INSTITUTIONAL FACTORS INFLUENCING IMPLEMENTATION OF INFRASTRUCTURE PROJECTS BY COUNTY GOVERNMENTS IN KENYA: A CASE OF EMBU COUNTY, KENYA

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ABSTRACT

Public infrastructure projects have taken a slow pace since independence. The records from the Kenya government 2014 on vision 2030 towards a globally competitive and prosperous Kenya (GOK, 2007) indicate that slow pace in implementation of public infrastructure projects has led to poor road networks; under standardized public amenities; non connectivity of the national grid line to industrial potential areas; poor mitigation measures in agricultural areas; and poor mechanization of the once competitive industries that are going under. This study sought to examine the factors that influence successful completion of county funded projects in Embu County, Kenya. The study objectives were: To examine the influence of stakeholders in the implementation of infrastructural projects in Embu County; To examine how management influences the implementation of infrastructural projects in Embu County, Kenya; To examine the influence of resources in the implementation of infrastructural projects in Embu County, Kenya; and To examine how governance influences infrastructural projects implementation in Embu County, Kenya. The study was modelled along the institutional Theory, Systems theory and Participatory Involvement Theory. Descriptive research design was used to survey a target population of 100 respondents. The study used primary data which was collected by use of questionnaires; which included structured and unstructured questions. Statistical Package for Social Sciences (SPSS), data analysis software, was used to analyze the quantitative data. Further, quantitative data was analyzed by use of descriptive and inferential statistics. Using the regression model to analyse data, the findings revealed that stakeholders negatively and significantly influences implementation of infrastructure projects by county governments in Kenya, The study also found that management, organizational resources and governance positively and significantly influences implementation of infrastructure projects by county governments. The study concluded that stakeholders, management, organizational resources and governance significantly influences implementation of infrastructure projects. The study recommended that that county governments in Kenya should involve and consult all stakeholders before the start of projects identification, resourcing, planning, implementation and in the monitoring and evaluation process so as to reduce conflict among the various stakeholders and that management be in the fore front of identifying resources for the projects, attending meetings, coming up with proper channels of spending for the projects and linking well with other stakeholders so as to achieve general planned projects success.

Key Words: institutional factors, implementation, infrastructure projects, county governments, Embu County, Kenya.
INTRODUCTION

According to the World Bank (2013), a project is defined as an undertaking that takes in inputs and gives out outputs that are desired by a group of people and or individuals within a given period of time. According to the World Bank, projects have a definite life cycle that is only done with when the project has achieved the desired objectives; marking its end. On the other hand, Kaliba, Muya & Mumba (2009) argue that projects range from the government or public funded infrastructural facilities like roads, electricity, railway lines, housing units, industries etc. to small run individual ventures like retail businesses managed by one or two people in a state or community. They add that projects require human, capital and non-capital resources like positive and enabling culture for their effective implementation.

Projects are used in all economic and non-economic fields as means of organizing the activity, aiming the achievement of desired objectives. Infrastructure refers to economic services from utilities such as electricity, gas, telecommunications, water and transport works such as roads, bridges urban transit systems, seaports and airports which are central in promoting economic activities in the country. Good infrastructure helps in providing economic services efficiently, promoting economic. Infrastructural projects are continuously under development everywhere in the world; however, since the 1990s, much of this development has been approached in a new way. Infrastructure projects are no longer solely government-procured. The new approach calls for more and more private involvement in the development of infrastructure projects (UNDP 2012).

The global economy pressures countries to implement and upgrade infrastructure projects in order to remain competitive, gain advantage or keep from falling further behind. The international financial crisis and global downturn will influence prospects for infrastructure investment, particularly in developing countries where income growth will be significantly affected (Cohen1980). Likely policy changes (based on short-term political considerations) result in a riskier environment for investment. Furthermore, citizens will be particularly concerned with price increases in those network sectors that government agencies are supposed to be supervising.

In order to release economic prosperity and well-being in a developing country like Kenya, it is paramount that the focus should be on infrastructure projects. In less developed countries therefore, public infrastructure development projects have the potentiality to facilitate sustainable development through the application of modern management methods and techniques as a result of ease of interaction with various experts in different fields. This pivotal role played by public infrastructure projects in sustainable development is recognized in chapter 27 of Agenda 21 of United Nations Charter (UN charter 1945).

Dailami and Klein (2015) while working on a policy paper on government support to private infrastructure projects in emerging markets notes that the role played by public infrastructure
projects which includes fighting poverty, opening markets and disposing illiteracy in equal measure cannot be ignored. They further assert that efforts should be put to ensure that every public infrastructure project initiated is fully implemented. Perrot and Chatelus (2000) note that in financing of major infrastructure and public service projects the government is usually the biggest sponsor.

In his research in the causes of delayed roads construction in Ghana, Agyeman (2010) found out that projects identification and implementation has been the core operational centre of almost all the world’s leadership and governments since ancient times. During the ancient times for example, sailors made boats that could be moved along the world oceans for business, they made passable roads for trade, had industries that produced good and other related projects like schools, roads, dams, buildings etc. With the emergence of devolved government, it is possible to improve efficiency and effectiveness of internal projects within the County governments and to relocate government services from central government offices to County closer to the citizens.

Infrastructure projects have the power to integrate economies by deepening trade, investment, business and financial links Studies in several Asian developing countries have shown that the presence of basic infrastructure such as road transport are key factors in GDP growth. Infrastructure may be owned and managed by governments or by private companies, such as sole public utility or railway companies. Generally, most roads, major airports and other ports, water distribution systems, and sewage networks are publicly owned, whereas most energy and telecommunications networks are privately owned. Publicly owned infrastructure may be paid for from taxes, tolls, or metered user fees, whereas private infrastructure is generally paid for by metered user fees.

Major investment projects are generally financed by the issuance of long-term bonds. Government-owned and operated infrastructure may be developed and operated in the private sector or in public-private partnerships, in addition to in the public sector. Many financial institutions invest in infrastructure among the County Governments in Kenya. The management of these infrastructure is essential so that the project can be completed on time and at cost consistent with the project plan. Project, implementation is carried out following the already laid down scheduled or work plan. It leads to the realization of project outputs and immediate objectives. Infrastructure Project implementation phase relies on the previous phases of project cycle and more specifically on the formulation stage and it calls for use of resources as per the activity schedule which in turn leads to the realization of results and subsequently recognition of the project thus contributing to the project overall goal.

In Kenya, the presidential process of development almost centralized major development projects like roads construction, schools constructions, hospitals provision, railways construction maintenance and many more; whereby projects identification, planning and resource allocation was done in Nairobi (Assaf et al, 2012). Factors like politics, corruption, financial embezzlements, tribalism or nepotism, misplaced priorities, low levels of technology and many
more influenced development projects implementation during the retired president’s Moi’s regime in the 8 identified provinces and their respective county councils by up to 54% (World Bank, 2012). The UNDP (2010) published a report that sought to find out the nature of projects and the rate of polarization in the country and found out that major projects in Kenya failed during Moi’s regime due to tribalism and nepotism in the defunct provinces; that grouped people along tribal lines and the major tribes with big populations dominated the public offices and projects.

The World Bank (2012) reported that, one of the major reasons as to why Kenya welcomed the new constitution was to eliminate the barriers of development and tribalism that was rampant by the dominant tribes. A report by KARI (2012) shows that, the promulgation of the Constitution of Kenya in August 2010 set the stage for major institutional reforms; both governmental and NGOs. Devolution of government and public participation are not only new, but are also critical components of these reforms. Also included in the devolution are bringing relevant development projects to the deserving needy people in the villages, slums and the marginalized areas in the country like West Pokot, Wajir, Mandera etc.

Most public infrastructure in Kenya therefore according to Kenya public infrastructure report of 2015, are funded by the government whilst minority are funded by non-government entities such as the industrialized countries including USA, Canada, and Sweden through their development funding agencies which are United States Agency for International Development (USAID), Canadian International Development Agency (CIDA), and Sweden International Development Agency (SIDA) respectively. Many scholars (Sappington & Stiglitz, 1987; Perrot & Chatelus, 2000; Dailami & Klein, 2015; Reeves, 2004) are of the opinion that public infrastructure projects in emerging economies like Kenya in most common cases are not fully implemented as per their original proposals and targets.

According to the GOK (2014) the country has made significant improvement in infrastructural projects, education, mining projects, water projects, SMEs projects and general industrialization since the new constitution was promulgated. The 47 counties in Kenya have their own project and development plans, fund part of their projects and get the deficit financial resources from the central government up to the tune of 35% of the national budget. However, a report published by the ministry of devolution (2013) showed that counties have made significant development in projects development and integration of ICT in projects development. In its report for example, Embu and Bungoma counties managed to repair, maintain and develop major road links in the year 2013/2014. The refurbishment of the Embu stadium and the Meru stadium by the Embu and Meru counties respectively were major examples cited of some works done by devolved units in projects development. In Kakamega for example, the road terminal joining Kisumu was carpeted with Ksh.110 million that came from the revenue of about 4.1billion that was collected by the Kakamega county government.
However, projects implementation in all the 47 counties has never been a success to a tune of 55% due to various prevailing constraints like lack of sufficient project finances, politicization of development projects, insecurity in some counties, poor state of enabling infrastructure, poor technology, low levels of community participation etc. (Republic of Kenya, 2013). In relation to the failure of projects in counties, Kagiri and Wainaina (2013) carried a study on the state of construction projects in Kiambu and Nairobi counties and noted that about 40% of construction projects like building of county offices, hospitals, classes, roads and waste disposal plants failed due to the poor technological knowledge and lack of expertise. In Nairobi County for example, 41% of road construction and maintenance failed in 2013 due to local technology that was employed whereby the contractors used local people and local road maintenance tools that had significant defaults compared to the technology used by the Chinese experts in constructing Thika super highway.

The World Bank (2013) carried a research on the state of projects implementation by county governments under the funds from the IMF and Dutch government in Nairobi, Muranga, Kisii, Kwale and Nandi, and found out that, only 21% of the development projects were efficiently and effectively completed in 2012/2013. Projects like re-carpeting of the existing roads, building of new classrooms in schools, erecting new hospital wards in the established hospitals, acquisition of new ambulances, agricultural tractors and water pumps failed to the tune of 48.25% in these counties. The Government of Kenya (2013) reports that 49.21% of the planned county development projects could not be achieved due to some unnecessary issues that could otherwise be avoided.

According to Kagiri and Wainaina (2013), major projects in the devolved units in Kenya have failed or taken longer than they should because of both the internal and external factors in the counties. In Kiambu County for example, nepotism, corruption and political differences led to the failure of up to 10 major projects out of the 32 that were to be completed in the year 2013/2014. In Bomet and Kisumu counties, lack of sufficient funds from both the national and county governments left about 60% of development projects not implemented. In the cases of Kwale, Kilifi, Embu, Taita Taveta, Garissa, Makueni, Kitui and Kisii counties (World Bank, 2013) up to 52% of the planned roads, hospitals, water reservoirs and schools buildings constructions failed due to the prevailing political differences, limited financial resources, poor infrastructure, rising insecurity cases and corruption and or embezzlement of funds.

Onyango (2013) shows that only 21% of the projects undertaken by Counties have been effectively and efficiently implemented, 45% are on the struggling end while the remaining have been abandoned or failed. Noted as major derailing factors in these projects implementation in the county are factors like political polarization between the county governor and the national government, nepotism and tribalism in County employment boards, poor roads, electricity and railway linkage (infrastructure), low level of technology, cultural beliefs, corruption, gender discriminations, bad local laws and regulations, insecurity, low levels of education and many
more. This has hindered effective implementation of development projects in the counties for over a long time now. Due to these issues in devolution, the study found its ground of argument.

**STATEMENT OF THE PROBLEM**

An examination of post-world-war planning history reveals that there have been many more failures than successes in the implementation of projects especially in the developing countries (World Bank, 2010). It is at implementation stage that most projects fail, and this has given concern to governments as well as the citizens. Implementation of development projects being the most crucial of all the stages of policy is not devoid of certain factors that influence it, some of these factors are: wrong priority; shortfalls in resource availability, inadequate assessment of targets, wrong scheduling of time for project completion, inadequate project identification, formulation and design, faulty conceptualization of policy, etc. As noted by Kaliba, Muya & Mumba (2009), the difficulties of administration rather than the nature of the project, have been the main troubles with public projects implementation. As a matter of fact, there is an abundance of project failure, resulting from inability to or poor performance in terms of fulfilling or effectuating policy purposes or intentions. In Kenya, counties have for about 4 years now carried out various projects successfully with counties like Embu, Meru and Kericho reporting up to 12% positive projects implementation, but a number of the 47 counties have failed on the way due to prevailing factors like wrong prioritization of development projects, lack of financial resources, political influence, corruption, low levels of technology, poor infrastructure, lack of community involvement, poor management support and many more. Other factors tied to slowed infrastructural projects implementations include: lack of well-developed infrastructural facilities, lack of sufficient financial resources, poor linkage and networking between the county government and developers, poor political and local leadership, radicalization of youths and many more. Due to this insurgency of issues in the projects failure up to the tune of 47%, in the counties, the research therefore sought to examine the constraints to successful implementation of infrastructural projects in devolved units in Embu County, Kenya.

**PURPOSE OF THE STUDY**

The purpose of this study was to examine the institutional factors influencing successful implementation of infrastructural projects in devolved units in Embu County, Kenya.

**GENERAL OBJECTIVE**

The main objective of this study was to examine the constraints to successful implementation of infrastructural projects in devolved units in Embu County, Kenya.
SPECIFIC OBJECTIVES

1. To assess the influence of stakeholders in the implementation of infrastructural projects in Embu County.

2. To establish the extent to which management influences the implementation of infrastructural projects in Embu County, Kenya.

3. To determine the extent to which resources influence implementation of infrastructural projects in Embu County, Kenya.

4. To establish how governance influences infrastructural projects implementation in Embu County, Kenya.

THEORETICAL REVIEW

Institutional Theory

The theory was put forward by Meyer and Rowan (1977) and supported by Meyer (2008) who viewed an organization’s survival from the point of its relationship with its external environment. The proponents of the theory argue that organizations usually reflect myths, routines and rules that have been developed over time and legitimated by knowledge from various professionals and they serve to guide the operations of the organization in regard to changing customer demands (Meyer & Rowan, 1977; Powel, 2007).

The rules, routines and myths usually influence institutional forces, resource dependencies, legal issues, organizational practices and conventions which consequently influence the performance of an organization. The theory was used by Mugo, Muathe and Waithaka (2017). The existing body of strategic management literature shows that institutional theory shapes the behaviour of organizations to act in a socially responsible way both to society and various stakeholders (Brammer, Jackson & Matten, 2012).

Zucker (2015) views institutional theory as one providing a rich but complex view of an organization and observed that in most cases these organizations are influenced by normative pressures either arising internally or externally such as the state policies or policies from the county and sub-county governments. Further these policies which are essentially pressures, lead a county government to be guided by legitimated elements which may include standard operating procedures, procurement rules, disposal and compensation procedures and state requirements which may often have an effect on directing attention away from public projects implementations.

The theory is applicable to the proposed study because it emphasizes on the need for organizational members to adhere to rules, routines, value and symbol systems, practices,
structures, organizational culture and cognitive scripts in regard to acquisition, deployment and coordination of resources in pursuit of improved performance. Macharia and Ngugi (2014) however note that the institutional theory is inherently difficult to explicate as it taps public projects taken-for-granted assumptions at the core of the social labour.

The main aim of this study therefore is to make the institutional theory more accessible and understood in terms of government policies. Robey and Holmstrom (2001) while studying transforming municipal governance in global context taking a case study of the dialectics of social change, notes that institutional theory tends to focus on the more resilient aspects of social structure and considers processes by which structures, schemes, rules, norms, and routines become more established as the authoritative guidelines for public infrastructure implementation.

**Systems Theory**

System theory tends to explain why many public infrastructure projects tend to fail and according to Bertalanffy (2012) the failure is mostly attributed to the various processes in place that the system must adhere to in order to be completed. One of these processes includes the funding process of the project and Bertalanffy hypothesizes that everything is part of a larger independent arrangement and most importantly centered on clarifying the whole of the project, its parts, and the relations between them. Public infrastructure project at the sub-county government incorporates many funding agencies which take into consideration the local, county, national, public, private and non-profit units within the project’s implementation area of jurisdiction.

Bertalanffy suggests that the systems theory acknowledges that successfully implemented projects requires a streamlined funding process, outlines the stages of funding and states while describing the project activities for implementation to be funded. The funding system therefore should be one that is open for project variances during the implementation process either in the upward or downward during the project period (Otieno et al., 2010). Further the interactions between the various funding agencies of the project affect the implementation of project. Nudurupati, Garengo and Tuner (2007) while studying the dynamics of performance measurement and organizational culture while applying systems theory found out that it is the best model in studying the critical factors influencing public infrastructure implementations due to its specialization in organization systems, the availability of researched material data, its uses on measurements of psychometric in nature and the fact that it is the dominant model for investigating service delivery in the public arena.

**Participatory Development Theory**

Chambers (2015) opined that participatory development theory seeks to ensure the inclusion of local beneficiaries of a public infrastructure project into the activities of the project implementations. Further that the project’s participatory planning must take into consideration
the local population which in this case the sub-county residents to the enable the public infrastructure development implementation success. Mohan (2008) on the other hand observes that participatory development theory promotes the improvement of efficiency and effectiveness of formal public infrastructure development programmes and the external and the local actors of the project must be involved.

This theory according to Chambers (2011) therefore devices a means of planning in development at the sub-county level which must involve the local sub-county communities and uses various planning tools which includes the Participatory Rural Appraisal (PRA) as one of the formal planning tools. Chambers add that by planning for projects and especially in devolved systems of governance causes a shift in power relations by valorizing voices that usually go unheard by political development groups as it seeks to include the illiterate, poor, marginalized people and all groups to represent own lives and livelihoods affected by the projects. Participatory Development theory therefore, according to Mohan (2008) increases the sub-county population, who are also the local recipients of the projects, ability to be self- determining in the implementation of the public infrastructure projects.

EMPIRICAL REVIEW

Stakeholders’ Role in Infrastructural Projects Implementation

Every project manager needs to identify project stakeholders and determine their needs and expectations of the project (Bright, 2010). Effective communication between stakeholders will ensure the project is successful and that everyone is on the same page. A stakeholder is someone that is involved in your project or has a vested interest in its success or failure. Project Management Book of Knowledge defines stakeholders as persons or organizations for example customers, sponsors, the performing organization, or the public, who are actively involved in the project or whose interests may be positively or negatively affected by the performance or completion of the project. (Project Management Institute, 2008).

Knowing who your stakeholders are is important and the process begins by developing healthy relationships. They help decide on issues from the beginning, during planning and at execution of the project. Therefore, stakeholders should understand how the project functions, including the project scope, milestones and goals (World Bank, 2013).

World Bank (2013) continues to show that there are five major types of stakeholders, Project manager, Project team, Functional management, Sponsors and Customers. Within the stakeholders, you have both internal and external classifications. Internal stakeholders are those directly affected by the project, such as employees. External stakeholders are not a part of the business, such as vendors or suppliers, but have an interest in its outcome (Wami, 2012). Primary stakeholders have a major interest in the success of a project because they are directly affected.
by the outcome. Customers and end users are primary stakeholders as well as some project sponsors, project managers, and team members.

According to corporate geek (2010), project sponsors are accountable for keeping the project on schedule. They should schedule regular meetings to review timelines, addressing complications that may arise, and assuring that the project manager remains on the task. Sponsors allocate and supply resources and finances to fund the project. The sponsor should have a clear understanding of what's expected in accordance with the scope, schedule, and resources needed for the project. Success of a project is largely dependent on the project sponsors leadership and support. The leadership provided by the sponsor helps identify cost overruns and provides alternatives in order to remain on budget (UN, 2010).

The role of secondary stakeholders is also important in infrastructural projects success. Secondary stakeholders help to complete the project. Though their role isn't primary, they assist with administrative processes, financial, and legalities. Communication between primary and secondary types of stakeholders will ensure that everyone is working toward the same goal. Lack of communication can cause a breakdown within the project. Project managers are internal stakeholders because they are directly involved in developing the project. They have authority to manage the project by handling responsibility of work performance, organizing and planning; effectively ensuring that all phases of the project are done accurately and efficiently. Vendors, suppliers, and outside organizations are external stakeholders because they supply needed elements for a project's success, they need to stay in communication at all times on goals, milestones and deliverables (UNDP, 2012).

Reeves (2004) defines participative planning process in public infrastructure projects as all the activities by which members of the public including citizens, users and consumers contribute to shaping the decisions taken by public organizations. Further the purpose and methods of fostering the participative process must be in scale or spectrum with the level of consultations at one end and more deliberative techniques on another end. This according to Reeves is to ensure that participative planning process promotes deliberate public infrastructure projects but necessarily a prescription on the method to use.

Njoki (2013) notes that participative planning process occurs in infrastructure projects at the government level and the local county governments where the projects are implemented. Njoki further notes that these participatory activities should be mapped to eliminate the bureaucratic participative processes that are traditional including written consultations to include more modern approach that includes the focus groups and opinion polls. Dailami and Klein (2015) opined that the public appetite for participation and involvement in public infrastructure projects is mixed although there is not much literature on the involvement of the public on participatory planning processes during public infrastructure projects.
The demand for participation, according to Dailami and Klein, depends on several factors which includes: whether the project is national or county government originated; what the law prescribes as enough public participation; and whether proof of public participation will eventually make much difference. Perrot and Chatelus (2000) believe that the reforms of public structures and governing systems is the key to public infrastructure projects development implementation however there is still a debate amongst the stakeholders’ of how vast the participatory public processes in public infrastructure projects should be attained in policy making and the major role of the elected representatives. Sappington and Stiglitz (1987) on the hand argue that the major enablers of public participations includes capacity and resources of the projects, the social capital and the attitudes of political players in the project area of implementation, and the managerial and civil society leaders engaged in the project processes. It however believed that the level of participation in a public infrastructure project relies so heavily on those on power and the process is never considered so important (Dailami and Klein, 2015).

**Management Role in Infrastructural Projects Implementation**

Project management as a discipline applies to any kind of project which is intended to deliver solutions. In order to achieve this, the project should be tailored to accommodate specific needs. Sharma and Yetton (2003) argue that management support is the only single most frequently hypothesized contributor and influence with respect to successful project implementation. According to Gemuerden and Lechler (2009), top management directly promotes project success as customer and highest organizational authority.

Project managers have the responsibility of the planning, execution and closing of any project. They provide the organizational environment for the successful completion of the project. They also assert that, the considerably high impact of top management on project success can also be interpreted from a more critical point of view, as it could indicate an overly strong involvement of top management in the process of the project itself. Research has identified that people management drives project success more than technical issues do (Scott Young and Samson, 2004.)

Top management is accountable for accomplishment of a stated project by creating clear and attainable project objectives. The project must receive approval and support from top management especially the management boards in the cases of government run projects; be it national governments or county governments (Jacobson & Rugeley 2009). Top management needs to brand the project requirement and be able to manage the three triple constraints: Cost, time and scope. This, they can do by first publicly the senior management must be committed with their own involvement and willingness to allocate valuable resources to the implementation effort (Shanks et al., 2000 cited by Bowling, 2009). This involves providing not only an appropriate amount of time and resources to get the job done, but also the necessary personnel for the implementation of projects (Awiti, 2008).
Polit & Beck, (2009) put forward that project managers must prepare a political game plan for managing important sponsors, stakeholders and constituents to mitigate project derailment. When difficulties arise, top management is in the best position to help the project team deal with them effectively (Apolot, Alinaitwe and Tindiwensi, 2010). Top management support is normally in the form of providing sufficient resources for the success of the project, sharing responsibilities with project team, communicating with project team authorities and responsibilities and supporting the project team in times of crisis or at unexpected situations. Ashaye (2010) proposed that many project managers of successful projects stressed the importance of investigating the underlying processes, apart from proper and detailed planning and allocating appropriate human and financial resources.

ALGA (2010) empirically proved that strong and committed leadership at the top management level is essential to the success of project implementation. The successful project manager should have the following skills and competences, flexibility and adaptability, preference for significant initiative and leadership confidence pursue, verbal thereby, forcefulness, effectiveness able to balance technical solutions with time, cost, and human factors poise, enthusiasm, imagination, well organized and disciplined and willing devote most of his or her time. As noted by Schultz and Slevin (1975), management support for projects, or indeed for any implementation, has long been considered of great importance in distinguishing between their ultimate success or failure. According to Deinty, Cheng and Moore (2005) infrastructure projects are characterized by crisis and uncertainty which combines to test the ability and performance of the project manager. Project implementation therefore depends upon the organizing, staffing and leadership qualities of the project managers and ability to influence positively.

There is a growing awareness of the relationship between implementation of infrastructure projects and project managers’ competence while Crawford (2000) states that project managers’ competence is in itself a key feature in project implementation and success with the view supported by Patanakul and Milosevic (2009). Competencies provide organizations with a way to define in behavioural terms what it is that people need to do to produce the results that the organization desires, in a way that is in keep with its culture. By having competencies defined in the organization, it allows employees to know what they need to be productive.

When properly defined, competencies, allows organizations to evaluate the extent to which behaviours employees are demonstrating and where they may be lacking (Dubois and Rothwell 2006). For competencies where employees are lacking, they can learn. This will allow organizations to know potentially what resources they may need to help the employee develop and learn those competencies. Competencies can distinguish and differentiate your organization from your competitors. Competencies can provide a structured model that can be used to integrate management practices throughout the organization. Competencies that align their recruiting, performance management, training and development and reward practices to reinforce key behaviours that the organization values.
Organizational Resources and Infrastructural Projects’ Implementation

Studies have viewed organizational resources such as human resources, financial resources, technology and organizational leadership as the basic building blocks of an organization responsible for production of goods and services (Kamau, 2013). This observation is in line with Wheelen and Hunger (2008) who posit that resources are organizations assets and are the basic building blocks of an organization. According to Armstrong (2009) people and their collective skills, abilities and experience, coupled with their ability to deploy these in the interests of the employing organization, are now recognized as making a significant contribution to organizational success and as constituting a major source of competitive advantage.

Funding is the act of providing economic resources, usually in the form of money, or other values such as effort or time, to finance a need, program, and project, usually by an organization or government. Usually, this word is used when a firm uses its internal treasury to satisfy its necessity for cash, while the term financing is used when the firms acquires funds from external sources (Gyula, 2008). Available funds may also refer to funds that can be withdrawn from a margin account at a brokerage firm, where margin loans are still exceptional. Chen (2007) mentions that for a project to be successful there should be enough fund allocated to finance its completion. Jackson (2010) added that project funds availability is an important factor that influences delivery of a project. Sambasivan and Soon (2007) stated that reports are an important way of keeping everyone informed and therefore managers should manage the project, plan for the project and monitor.

Wasike (2012) argues that, in many companies or governments, poor definition of roles and responsibilities among the technical personnel becomes an issue. If a project is to operate effectively, everyone must know not only what their own roles and responsibilities are, but also what the other players are doing—or not doing. If roles and responsibilities are unclear, people will be less effective and accountable and will become frustrated, and tasks will fall through the cracks. Ayudhya (2012) argues that the above mentioned issues purely revolve in projects when qualified personnel are not in play.

Kaliba (2009) argue that most governments related projects fail because the government hires its personnel at meager pay and little money which in most cases discourages the employees, gets the wrong men for the job and at times limits the projects’ success just because they don’t get the right personnel. In Central Gambia and Central Kenya for example, government projects became successful in the years 2004-2010 because the governments in place allocated the regions much needed resources for projects; a factor that later saw the technical personnel and management improve, leading to an influx of success in the projects (United Republic of Tanzania, 2009).

UN report of 2010 shows that lack of financial resources for projects in both developed and less developed countries is not the only challenge facing projects implementation but the giant challenge lies on how the people involved in handling these finances are at the capacity of
managing the little finances for the effective accomplishment of the intended projects. Financial literacy helps in empowering and educating financial managers and other projects managers so that they are knowledgeable about finance in a way that is relevant to their projects and enables them to use this knowledge to evaluate products and make informed decisions. It is widely expected that greater financial knowledge would help overcome recent difficulties in advanced credit markets, shrinking financial sources and many more.

According to the Constitution of Kenya (2010) financial management skill should be given to all the stakeholders handling the county finances that are meant for development projects. It gives the major component of the county by saying that, in county governance, the first thing counties must do is set up the County Treasury. The County Treasury runs the county budget process and is responsible for most matters of public finance at county level. The County Treasury is supposed to be made of the County Executive Committee (CEC-member for finance), the Chief Officer (the civil servant in charge of finance under the CEC member), and any department below the Chief Officer responsible for financial matters.

The County Executive Committee as a whole is responsible for discussing the county’s approach to finances and assessing its performance. County officials must, as soon as possible, set up the County Budget and Economic Forum, a formal body that brings together government and citizens to consult on plans and budgets. Officials are also charged with ensuring that the county follows fiscal responsibility principles that are in the PFM Act. However a study by Kantai (2013) shows that in 39 out of the 47 counties, nepotism and favoritism dominated in employing the people especially those handling finances and this has greatly hindered the access to finances and implementation of projects.

Majanja (2012) conducted a study on financing constraints of infrastructure projects in Kenya. The study covered 87 construction firms. Two alternative variables to measure financing constraints were used. The first on was based on the degree of financing constraints that firms face and the other was the use of bank credit by firms. To measure perceived financing constraint, respondents were asked to rate access to financing as a constraint of project performance. The study results found out that financing constraints were a major obstacle faced by construction firms. The study found out that the local construction firms faced critical issues and problems which affected financing of their projects. Majanja suggested that, government should foster Public-Private Partnerships in order raise adequate funds for constructing projects. Simmons, (2012) also noted that local firms had a problem of accessing credit facilities as they were viewed to lack collateral security. However, Majanja assumed a direct relationship between finance and success of a project. This study includes other important variables such as monitoring and evaluation and group dynamics management so as to improve the viability of the results.

Gitenya and Ngugi (2012) study on the assessment of determinants of performance of housing projects in Kenya pointed out that most of the local firms engaged in infrastructure
projects are often hindered by lack of adequate financial resources. There is always a budget for the project and this is a major constraint. Wysocki (2012) stated that while the overall resources available may be in theory sufficient to complete the project, there were difficulties arising out of the way in which the project has been scheduled. For example, there may have been a number of activities scheduled to take place at the same time and this could not be possible given the amount of resources available. The amount of resources available therefore, plays a critical role in the success of a project undertaken. Project managers are advised therefore to optimize the utilization of resources so as to ensure project completion within the budgeted cost (Allen, 2012).

Carter (2012) studied on the challenges facing road infrastructure firms in sub-Saharan Africa in their effort to delivery of quality projects. The study analyzed impact of outsourcing technical human resource using 100 questionnaires issued to project managers and contractors. The study showed that the local construction firms faced a number of challenges in comparison with foreign firms especially in obtaining the technical staff with the required competency skills to undertake projects. The study also found out that every organization has a limited number of resources to perform tasks. A project manager’s primary role therefore is to find a way to successfully execute a project within these resource constraints.

**Influence of governance and Leadership on infrastructure implementation**

The growing focus on governments to implement public infrastructure projects as a major platform to gain public trust and support has increased policy interests in the same area. Kerr and Newell (2001) while looking at projects dealing with policy induced technology adoption, notes that government departments and projects implementing agencies depend on these policies to ensure that public infrastructure project meets certain pre-conditions and post-conditions. While the policies does not make it mandatory for the project initiators to incorporate the project recipients, Kerr and Newell argues that the policies should cut across the project’s sectorial engagement in order to meet the pre-and-post- requirements.

Governments develop policies that are geared towards mass implementation of large infrastructure projects with the main aim of pursuing social goals and to correct society failures and promote economic efficiency (Kaiser & Ahlemann, 2010). Further in implementation of projects, policies are developed to achieve the goals of redistribution of resources from one group of people to another group to achieve same level development. This according to Kaiser and Ahlemann (2010) should be done at minimum cost. Otieno et al (2010) opined that an ideal policy on project implementation should focus on the project’s effectiveness, where the projects implementation prospects should meet the institutional, regulatory and socio-economic goals of the recipients in a manner that is appropriate to the proponents of the project.

Furthermore a good policy should advocate for effectiveness which entails the project to be as cost effective as possible, fair dealing, where the stakeholders should be treated equally without
discrimination or prejudice including protection of confidentialities of the project where necessary (Otieno et al., 2010). Njoki (2013) asserts that policies should aid project implementation by upholding the integrity of the project to ensure informed decision making which requires public infrastructure projects to base their implementation on accurate information and ensure basic requirements are met.

World Bank (2012) on the other hand requires transparency to enhance public infrastructure projects openness and clarity. The main objectives of government policies therefore is to link public infrastructure projects planning, budgeting, and achieving financial requirements during the implementation process. Macharia and Ngugi (2014) while studying the determinants of successful completion of power projects in Kenya power and lighting company notes that government policies on mega projects plays a greater role as it influences the size, structure, conduct and performance of the government entity during implementation process.

Perrot and Chatelus (2000) note that in financing of major infrastructure and public service projects the government is usually the biggest sponsor. Most public infrastructure in Kenya therefore according to Kenya public infrastructure report of 2015, are funded by the government whilst minority are funded by non-government entities such as the industrialized countries including USA, Canada, and Sweden through their development funding agencies which are United States Agency for International Development (USAID), Canadian International Development Agency (CIDA), and Sweden International Development Agency (SIDA) respectively. Many scholars are of the opinion that public infrastructure projects in emerging economies like Kenya in most common cases are not fully implemented as per their original proposals and targets.

RESEARCH METHODOLOGY

Research design

This study shall adopt a descriptive survey method of research. According to Mugenda and Mugenda (1999) descriptive method of research is a process of collecting data in order to test hypothesis or answer questions concerning the current status of the study of the study. Such method of study determines and reports the way things are, by allowing the individuals give personal relevant opinions and attitudes. Orodho (2009) says that the survey report in research deals with incidence distribution and interrelation of educational variables and that the purpose is to describe the nature of existing conditions and can be compared and also determine relationship that exist between specific events. Kraemer (1993) describes a descriptive survey as a means of gathering information about the characteristics, actions or opinions of a large group of people. Surveys are capable of obtaining information from large samples of the population. This design is suitable as it shall help bring out information on attitudes that would be difficult to measure using observational techniques. The use of descriptive survey design enabled the researcher determine the existing relationships between specific projects.
Target Population

Target population in statistics is the specific population about which information is desired. According to Ngechu (2014), a population is a well defined or set of people, services, elements, events, group of things or households that are being investigated. This definition ensures that population of interest is homogeneous. Population studies are more representative because everyone has equal chance to be included in the final sample that is drawn according to Bryman (2016). In Embu County, there are over 200 proposed development projects in all the ministries in the County government, starting from the ministry of education down to the ministry of water and sanitation. There are 10 ministries under the country government headed by the county secretaries. The study specifically focused on the Department of Transport & Infrastructure - County Government of Embu. There are 55 attached employees at the department and 45 temporary attaches. This made a target population of 100 respondents at three categories.

Sample Size and Sampling Procedure

Kerlinger (2003) defines a sample as a subset of a population where the actual study is conducted. According to Orodho (2009), the probability of getting a representation of the target population is of great significance in any given study. Since the population of the study is small, a census of all respondents was taken.

Data Collection Instruments

The researcher used a questionnaire to collect data. The questionnaire helped the researcher to collect data on knowledge, opinions as well as attitudes of respondents towards determinants of successful infrastructural projects implementation in Embu County. Each item on the questionnaire was developed to address specific objectives of the study. The questionnaire was preferred for this study because it was practical and was used to collect data from a large number of people within a short time and in a relatively cost effective manner. Piloting was done to test the validity and liability of the instrument. The questionnaire was structured and comprised of two sections where the first section collected data on the respondents backgrounds information while the second section collected data on the study variables.

Data Collection Procedures

After receiving a research approval from University, the researcher sought permission from the Embu County Government office and clearance from the Clerk's office. The researcher then came up with a visit schedule and visits the County in order to get consent from the respondents to administer the instruments. This enabled the researcher to familiarize with the respondents. The researcher with the help of one research assistant administered the questionnaires to the
respondents. The researcher assured the respondents of strict confidentiality in dealing with the responses.

**Data Presentation and Analysis**

Both qualitative and quantitative data collected was analyzed on the objectives and research questions of the study using descriptive statistics such as frequency tables to show the general features of successful project implementation. Statistical Package for Social Sciences (SPSS), data analysis software, was used to analyze the quantitative data. Further, quantitative data was analyzed by use of descriptive and inferential statistics. Descriptive statistics such as means, multiple regression analysis, frequencies, standard deviation, and percentages was used to profile sample characteristics and major patterns emerging from the data. Quantitative data was presented in tables and figures. The regression analysis model was formulated as follows

\[ Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon \]

Where: \( Y \) - is effective infrastructure implementation; \( \beta_0 \) is the constant or coefficient of intercept; \( X_1 \) = is stakeholders’ involvement; \( X_2 \) = is management commitment; \( X_3 \) = is availability of resources; \( X_4 \) = is government policies and regulations; \( \beta_1 \ldots \beta_4 \) represents the corresponding coefficients for the respective independent variables; \( \varepsilon \) is the Error term (Disturbance factors)

The overall significance of the model was tested using analysis of variance by use of F statistics at 95% confidence level while the coefficient of determination \( R^2 \) was used to show the contribution of independent variables on the dependent variable.

**RESEARCH RESULTS**

**Stakeholders Role and Implementation of Infrastructure Projects**

The study findings established that respondents were indifferent on whether resources identification and resources allocation was performed by stakeholders. The findings also revealed that resources mobilization influences projects implementation and monitoring and evaluation influence projects success. The findings of the regression model established that the relationship between management roles and the implementation of infrastructure projects by county governments in Kenya was positive (B = 0.032) and significant (0.032<0.05).

**Management Role and Infrastructural Projects Implementation**

The findings of the study established that the rate of management allocation of resources, regular managements’ involvement in meetings, the rate of decision making by managers and the rate of projects supervision by managers influences infrastructural project implementation. The study also established that project status was communicated throughout their involvement in projects.
and that the respondents were indifferent on whether informational materials available to orient the project team and stakeholders, progress reports are provided by contractors to the key stakeholders, meeting expectations regarding the frequency and content of information influences infrastructural project implementation. The findings of the regression model established that the relationship between management roles and the implementation of infrastructure projects by county governments in Kenya was positive (B = 0.032) and significant (0.032<0.05).

**Organizational Resources and Infrastructural Projects Implementation**

The study established that the availability of resources influence the implementation of infrastructural projects to a very great extent. The findings also revealed that salaries paid to county projects employees influence infrastructural projects implementation however the respondents were indifferent on whether money provided by the county government for expertise and financial resources provided for projects implementation influences infrastructural projects implementation. The results of the regression model revealed that the relationship between organizational roles and implementation of infrastructure projects by county government in Kenya was positive (B= 0.0190) and significant (0.004<0.05).

**Governance and Projects Implementation**

The study found that accountability from politicians and others influence projects success and that corruption from the politicians has been the source of projects failure. The findings also revealed that transparency in projects implementation has a significant influence in their success but there were indifference on whether employees in the county projects show nepotism and favoritism in implementation. The regression results established that there was a positive (0.266) and significant (0.00<0.05) relationship between governance and implementation of infrastructure projects by county governments in Kenya.

**REGRESSION ANALYSIS**

Regression analysis was undertaken to determine the relationship between the dependent and independent variables. The regression analysis comprises of the model summary, analysis of variance (ANOVA) and regression coefficients.

**Table 1: Model Summary**

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.570a</td>
<td>.325</td>
<td>.292</td>
<td>.14210</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Governance, Management, Stakeholders, Organizational resources
The model summary results on table 1 shows that the coefficient of determination (R square) value is 0.325. This indicates that the independent variables (governance, management role, stakeholders role, organizational resources) accounts for 32.5% of the variation in the dependent variable (implementation of infrastructure projects) while 67.5% is influenced by other factors which the study did not consider.

**Table 2: Analysis of Variance**

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>4</td>
<td>.200</td>
<td>9.883</td>
<td>.000b</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>82</td>
<td>.020</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2.454</td>
<td>86</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: Implementation of infrastructure projects  
b. Predictors: (Constant), Governance, Management, Stakeholders, Organizational resources

The Analysis of Variance (ANOVA) results on table 2 shows that F statistics value (9.883) is significant at 95% confidence level as the p value (0.000) is less than the significance value of 0.005. This shows that the regression model is significant and a good predictor of the relationship between the dependent and independent variables.

**Table 3: Regression Coefficients**

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>1.449</td>
<td>.819</td>
<td>1.769</td>
</tr>
<tr>
<td></td>
<td>Stakeholders</td>
<td>-.253</td>
<td>.062</td>
<td>-.542</td>
</tr>
<tr>
<td></td>
<td>Management</td>
<td>.314</td>
<td>.144</td>
<td>.306</td>
</tr>
<tr>
<td></td>
<td>Organizational resources</td>
<td>.190</td>
<td>.082</td>
<td>.049</td>
</tr>
<tr>
<td></td>
<td>Governance</td>
<td>.266</td>
<td>.071</td>
<td>.502</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Implementation of infrastructure projects

The coefficient results on table 3 show that there was a negative (B = -0.0253) and significant (0.00<0.05) relationship between stakeholders roles and the implementation of infrastructure projects. The results also show that the relationship between management roles and the implementation of infrastructure projects is positive (B = 0.032) and significant (0.032<0.05). The results further show that the relationship between organizational roles and implementation of infrastructure projects is positive (B= 0.0190) and significant (0.004<0.05). Finally, according to the results there is a positive (0.266) and significant (0.00<0.05) relationship between governance and implementation of infrastructure projects. This results indicate that stakeholders, management, organizational resources and governance influences implementation of infrastructure projects by county governments in Kenya. According to Gemuerden and
Lechler (2009) top management directly promotes project success as customer’ and highest organizational authority. Project managers have the responsibility of the planning, execution and closing of any project. IDA (2008) also supports that good governance is seen as critical to the development process and to the effectiveness of development assistance’. It is also evident that projects are usually selected and framed as the expression of political government as part of their commitment to the people.

CONCLUSIONS

The study findings established that stakeholders’ participation negatively and significantly influence implementation of infrastructure projects by county governments in Kenya. The study based on this finding concludes that stakeholder participation has a significant influence on the implementation of implementation of infrastructure projects by county governments in Kenya.

The findings also established that the management of the county positively and significantly influences implementation of infrastructure projects by county governments in Kenya. The study therefore concludes that the management style of the county significantly influences the implementation of implementation of infrastructure projects by county governments in Kenya.

The findings of the research established that organizational resources positively and significantly influence implementation of infrastructure projects by county governments in Kenya. Based on this result, the study concludes that implementation of infrastructure projects by county governments in Kenya is significantly influenced by organizational resources allocated to the project.

The study findings also revealed that governance significantly and positively influences implementation of infrastructure projects by county governments in Kenya. The study based on this finding concludes that governance significantly influences implementation of infrastructure projects by county governments in Kenya.

RECOMMENDATIONS

The study concluded that stakeholder participation had a significant influence on the implementation of implementation of infrastructure projects by county governments in Kenya. The study therefore recommends that county governments in Kenya should involve and consult all stakeholders before the start of projects, idealization, identification, resourcing, planning, implementation and in the monitoring and evaluation process as such would reduce conflict among the various stakeholders.

The study further concluded that that the management style of the county significantly influences the implementation of implementation of infrastructure projects by county governments in Kenya. The study therefore recommends that management be in the fore front of identifying
resources for the projects, attending meetings, coming up with proper channels of spending for the projects and linking well with other stakeholders so as to achieve general planned projects success. This can be done by regular analysis of SWOT and give laid down recommendations to be lived up to.

Third, the study concluded that that implementation of infrastructure projects by county governments in Kenya is significantly influenced by organizational resources allocated to the project. The study therefore recommends that resources with a bias to human resources and financial resources should be checked into and both the county and national government should come up with strategies of allocating sufficient finances and hire qualified and sufficient personnel.

Finally, study concluded that governance significantly influences implementation of infrastructure projects by county governments in Kenya. The study therefore recommends that governance should be paramount in projects success. The local politicians, the local leaders and national ones should keep politics, nepotism, tribalism and corruption out of projects. This way, the government will be able to link well with other bodies and make projects’ success a reality.

REFERENCES


