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Abstract

Stakeholder analysis is component in a project design and implementation central to achievement of the goals and objectives for which projects are carried out. This study aimed at establishing the effect of stakeholder analysis on performance of road construction projects in Elgeyo Marakwet County. The study was anchored on Stakeholder Theory. The study population comprised of 19338 individuals who included employees of the county working within the road sector, personnel within various road construction agencies, contractors and community beneficiaries of the project. Stratified random sampling was then used to group individuals into two homogenous groups, one working directly with the project and the other of beneficiaries. Proportionate random sampling technique was then employed to sample 103 respondents in the first group who included Managers (4), County government employees (29), KURA (6), KenHA (6), KERRA (13) and Contractors (45). Simple random sampling was adopted to select 377 respondents from the community. Data collection instruments were self-administered questionnaires for personnel working directly with the project. On the other hand research assistants facilitated focused group discussions to get views from the community stakeholders. Both descriptive and inferential statistics informed the data analysis and presentation. Descriptive statistics included; percentages, means, standard and deviation. Inferential statistics was Analysis of Variance (ANOVA) and multiple ordinal regression equation analysis. Statistical package for Social Sciences (SPSS 23.0) software helped in data analysis. The study found out that stakeholder analysis had significant effect on performance of road construction projects (β_3=0.203, P <0.05) on performance of road construction projects in Elgeyo Marakwet. The study recommends county Government should develop blueprints to guide road contractors in road project activities. Hence establish a favourable environment for implementations of road projects.

Introduction

Roads, and means of transport, make a crucial contribution to economic development and growth and bring important social benefits. Poorly maintained roads constrain mobility, significantly raise vehicle operating costs, increase accident rates and their associated human and property costs, and aggravate isolation, poverty, poor health, and illiteracy in rural communities (World Bank, TRN-4, 2005). Rural roads are the tertiary road system in total road network which provides accessibility for the rural habitations to market and other facility centres. In India, the government for five decades has taken rural roads in the context of overall rural development, hence attempted to provide all- weather connectivity with some level of achievement. The long term road development plans for the country provided policy guidelines and priorities for rural, while the funds for rural roads were allocated in the Five Year Plans (Ayush, 2014). The government of India has undertook a dedicated program targeted to provide connectivity to all habitations having population of 1000 and above (500 and above in hilly, desert and tribal areas) by 2009 and also aimed to upgrade the existing rural roads for overall network development, providing an objective approach to expansion of road network(Ayush, 2014). In construction projects, monitoring and evaluation is a vital process in project delivery which is aimed at ensuring that major objectives and goals are achieved.

The research by Roads Australia Fellowship, (2017) shows the road network in Australia and New Zealand comprises of over 900,000 kilometres of pavement with a value exceeding 200 billion dollars. It is observed that infrastructure; particularly the road network, keeps Australia running. The aim is that roads ensure mobility between neighbourhoods, and much more. The quality of the road network affects almost everybody in daily life;

users, residents, consumers, employees, businesses or taxpayers, all care that roads are managed efficiently and are able to deliver good service to society. Expectations for personal mobility have grown in the past and will still do in the future and that more than 80 % of motorized inland passenger transport is using the road – not taking into account cycling and walking. This qualifies the importance attributed to this infrastructure. Roads form linkage to all other modes of transport. With so much freight and personal business movement depending on the road networks, the research says "our daily life would literally be hampered without them.

With reference to Australia, the capacity and cost associated with maintenance is interdependent on locality as 83% of the road network is defined as regional infrastructure. Maintenance on regional local roads grew nationally from 1.1 billion dollars in 2006/2007 to 1.6 billion dollars in 2011/2012 with analysis providing per capita funding data in regional centres valued at $1700 as opposed to $200 in urban centres, Roads Australia Fellowship (2017). Ogweno, Muturi and Rambo (2016) argue that, in Pakistan, it is in very rare cases that large construction project are completed on the time specified or agreed upon. Around 80 percent construction projects in Pakistan faced delays and cost overruns. In Kampala, Uganda northern by-pass which was to take two and a half years; instead took more than five years and the cost had similarly gone up by more than 100 percent.

Delays also lead to cost over-runs, and less and less work performed despite the increase in construction budgets, Ssepuuya (2008), with concurrence by Rambo *et al.*, 2016. Delay was also noted in Lao People's Democratic Republic, where the Champasack Road Improvement Project (CRIP) was completed after a delay of 23 months. The objective of the project was to rehabilitate and improve the 200 km road with aim to improve transport services in the southern region (African Development Bank, 2005).In fact, as seen in this overview, massive resources are used in roads projects for which the public require value for money spent. It should further be recognized that, to be an effective management tool, monitoring should be regular but should take into account the risks inherent in the project/programme and its implementation. He observes that lack of effective and timely communication of information to the users is one of the underlying weaknesses to effective M & E. Interpretation and relay of M & E information is key to this process than just gathering and storing data.

The African countries through the African Union (AU) have designated nine highways for development to contribute to African integration. The highways referred to as Trans-African-Corridors or Road Corridors fall in two extremities as East-West routes namely; Trans-African Highway 1 (TAH 1), Cairo-Dakar Highway, 8,636 km; Trans-African Highway 5 (TAH 5), Dakar-Ndjamena Highway, 4,496 km; Trans-African Highway 6 (TAH 6), Ndjamena-Djibouti Highway, 4,219 km; Trans-African Highway 7 (TAH 7), Dakar -Lagos Highway, 4,010 km; Trans-African Highway 8 (TAH 8), Lagos-Mombasa Highway, 6,259 km; Trans-African Highway 9 (TAH 9), Beira-Lobito Highway, 3,523 km and the North-south routes namely; Trans-African Highway 2 (TAH 2), Algiers–Lagos Highway, 4,504 km; Trans-African Highway 3 (TAH 3), Tripoli–Windhoek–(Cape Town) Highway, 10,808 km; Trans-African Highway 4 (TAH 4), Cairo–Gaborone–(Pretoria/Cape Town) Highway, 10,228 km. These projects are implemented through United Nation Economic Commission for Africa (UNECA), African Development Bank (ADB) and the African Union (AU). The same is stimulated by regional economic blocks of Arab Maghreb Union, Economic community of West African States (ECOWAS) and the South African Development Community (SADC). The roads are at various stage of completion averaged at 80%.

The current road infrastructure across the continent is poor resulting in high cost of transport. This makes goods produced in the continent less competitive compared with the rest of the world. Bad roads and lax regulations also cost lives. The World Bank states that a 10 per cent drop in transport cost would accelerate intra-African trade by 25 per cent, African recovery, United Nations (2002). The efforts to integrate the continent by road network are hampered by a number of challenges. Insecurity in some areas has made use of roads impossible. Wars besides preventing road construction also cause damage to already established works resulting in need for reconstruction thereby increasing costs as the case of Democratic Republic of Congo. There are also highway check points and border controls which limit use of roads. Even the flow of traffic is prevented by such issues touching on neighbour relations as is with Morocco and Algeria whose border is closed.

In many African countries, roads are concentrated in urban areas or around coastal ports which are trade routes established during colonial times to facilitate overseas shipment of commodities. Far fewer roads link neighbouring countries in regional networks. United Nation report in 2012 gives crude estimates to show that $18-25 billion per year as required to provide adequate infrastructure in Africa. The continent currently only invests about $5 billion annually. In a bid to attract funding to this sector, some innovative ways have been adopted such as public private partnerships. Sourcing from non-traditional lenders like China, engaging private sector in programs such as Build-Operate-Transfer (BOT), Finance-Rehabilitate-Operate-Maintain (FROM) and use of infrastructure bonds popularly Known as Euro-bonds. However, the private sector infrastructure investment in Africa has been poor. Many consider returns on investment on roads to be very low especially the rural infrastructure. In Africa between 1982 and 1994 private companies financed projects worth $340 million,

notes the ECA. In comparison, Latin American private companies invested $10.5 billion in infrastructure during the same period.

Most public spending on infrastructure in sub- Saharan Africa is through State enterprises such as the Kenya Roads Board, the Uganda National Roads Authority, the Tanzania National Roads Agency and The Rwanda Transport Development Agency. These agencies, among other state enterprises, are unable to spend more than one-third of their budgetary allocations because of poor planning, deficiencies in budget preparation and delays in procurement, Africa Recovery, United Nations (2002). The fiscal budgets for the East African countries on road construction have progressively increased, targeting key road infrastructure of these countries in order to promote flow of goods and services among them. For instance Kenya allocated $954mn, $1.1bn, $1.3bn in 2013/14, 2014/15, 2015/2016 respectively for roads. Uganda, Tanzania and Rwanda allocated $936mn and increase of 18.2%, $870mn, $10.2mn respectively. Noting the challenges faced by the road construction agencies, there is a need for an established system to track use of these funds and ensure quality work is done.

In Ghana, the construction contributes an average of 8.5% of GDP (Kessides, 1993). The sector employed about 2.3% of the economically active population in 2002 (Ndulu, 2006). Unfortunately the sector faces a major construction delay which is endemic and its economic and social impact is often discussed Rambo et al., (2016). According to the study by Frimpong, Oluwoye and Lynn, (2003), that investigated factors that cause delays and cost overruns in the underground water projects in Ghana, it was found that the causes cut across all construction projects.

Roads in Kenya are under three Road Authorities who are responsible for the management, development, rehabilitation and maintenance of designated road sub-networks. Kenya National Highways Authority (KenHa) responsible for national road network (classified as classes A, B, and C roads) totalling 14,000km. These are the international trunk roads, National trunk roads and primary roads. Kenya Rural Roads Authority (KeRRA) responsible for rural roads (classified as classes D, E, and unclassified rural roads) totalling 132,000km. These roads are referred to as secondary and minor roads. Kenya Urban Roads Authority (KURA) responsible for all public roads in cities and municipalities except where those roads are national roads, totalling 15,000km. The Roads-Sub-Sector is managed by the Ministry of Transport and Infrastructure, with Kenya Roads Board (KRB) being the fund manager for Fuel Levy and the execution of road-works being carried out by the three Road Authorities (KRB Survey, 2015). Vision 2030 recognizes the critical role of developing cost effective world class infrastructure facilities and under the Vision 2030, Kenya has taken up several ambitious road development programmes. However, the planning, design, construction, maintenance and operation of these roads are applying traditional approaches and adopting conventional materials without major new innovations. The impact of the road development programmes in the country will be limited unless these programmes are continuously informed by research (Integrated National Transport Policy-2009). The Ministry of Roads has undergone major reforms in the last few years, all geared towards improving service delivery and realising value for money. Roads infrastructure is a critical component to our economy which is expected to experience rapid growth that would stimulate and enable the country achieve middle level income status. It is therefore prudent for our country to invest heavily in its roads sector among other infrastructure that will catalyse growth of all other sectors such as trade, industry, Agriculture, Transport, Health among others.

By recognising this importance, the government invested heavily in the road sector steadily increasing the budgetary allocation for roads to KSh. 100 billion in the financial year-2010/2011 representing an increase of 8 fold over the last eight years, (Cost Estimation Manual for Road Maintenance Works, 2011). During the financial year 2017/2018, the government allocated 134.9 Billion to the sector (Fiscal Budget Paper, 2017/18). In this report, 1950kms of new roads have been tarmacked since 2013, and 7000kms were progressing at various completion levels. Monitoring and evaluation when carried out correctly and at the right time and place are two of the most important aspects of ensuring success of many projects. At regional and sub-regional scales, M & E is important for assessing the sustainability of local practices, and can be important tool to assist with management planning in Non-Government projects (Margoluis & Salafsky, 2010).

Elgeyo Marakwet County is one of the 47 counties spanning 3029 sq. km with three distinct topographical layouts: the high lands, escarpment and the valley basin which forms part of the Great Rift Valley. The County roads are managed under the infrastructure sector (CIDP 2013/17). The sector comprises of the Directorates for Public Works and that of Roads and Transport. The baseline data shows the main actors in roads construction in the county include the county roads department that leads the fiscal planning process, KeRRA, KURA, KenHA, KRB, Kenya Forest Service (KFS) and Kenya Wildlife Service (KWS). The baseline specifies the roads as: Panelled/Bitumen- 196 km; Gravelled-1300.15km; Earth roads- 486.16km giving a total of 1882.31 Km of road network, which comprises of 1001.41km new road network in 2017 compared to 2013. The approved budget paper 2018/2019 gives the roads network as 2,060.64 km. 196.84km comprising 9.5% is bitumen and 178km (8.6%) is being upgraded to bitumen standards (EMC2018/2019 approved budget). The road projects according to the sector plan (CIDP, 2013/2017) will

cause high impact on food security, income and job creation. Will improve travel access, reduce instances of accidents, improve drainage and open up inaccessible areas. The roads are tabulated in Appendix VI:

The information from the CIDP showed there were 6 bridges, 1 box culvert and 27 drifts. The sector was actively involved in construction, upgrading, rehabilitation of roads, control of axle loads, management of equipment and design of roads. Roads under the county government (the unclassified roads) were done using internal human resource, whereas those by other agencies were contracted works. During the last five fiscal years; 2013/14 till 2017/18; the county operated a budget of KSh. 1,881,024,623 on County roads- which consists of both the development and recurrent expenditure. The county has projected to tarmac 251km of road during 2018/2022 five year plan period.

The county's report on infrastructure sector performance review, 2013/2017; indicates that 60% of the county's population of 400000 (Census, 2009) inhabitants live within 2km of road network, hence easily access the road. The data does not include foot paths. The reports note the benefits for the network as linkage to irrigation schemes, enhancement of local tourism, link to major shopping centre, open linkage to other counties, link farmers to agriculture processing plants, improve security, reduce commute time, reduce road use wear and tear and connect schools and other social amenities hence lift the standard of living. This information significantly shows that the road sector in Elgeyo Marakwet, County has received massive attention and resources that need to be well utilized. It is upon this that this research will investigate the performance of road construction based on time, cost, scope and satisfaction, as informed by the M & E process.

Stakeholder involvement is important in achieving evidence-based policy, management and accountability decision making. The information gathered from these processes is used to track costs, schedules, scope and quality among other key indicators of performance. The review above shows colossal sum of money and other inputs are used within the roads sector. The need for transparency and accountability and the value for money principle inform the huge role M & E has to play in construction projects.

Statement of the Problem

Despite the government's commitment to realize development through funding of various road development projects; road performance continue to face cost overruns, rework, scope variation, customer dissatisfaction and delay due to many pitfalls in monitoring and evaluation of projects in Kenya, Hassan (2013). Road construction projects have been facing challenges like delay in completion, cost overruns, and poor quality, Maina (2013). For instance, in the construction of Thika Super Highway, the cost escalated from 26.44 billion to 34.45 billion, World Bank(2014).This has raised a lot of questions on the role of monitoring and evaluation in attainment of successful road construction projects in Kenya and in particular Elgeyo Marakwet County. The contract for the 12km Iten-Bugar road in Elgeyo Marakwet was awarded in 2010, as a two year contract yet the road was completed in 2016, a delay of four years. Infrastructural development of the road network in Kenya is a sector that has been emphasized by the government as a key incentive to spur economic growth (Kenya vision 2030). A large share of the national budget resource allocation goes to this cause, Gitahi (2015). During the 2013/2014 fiscal year, 7.7% of the National budget allocation went to Ministry of transport and Infrastructure (Institute of Economic Affairs, budget guide, 2013).Despite the government's commitment to invest on road projects, numerous road projects in Kenya experience extensive delays and thereby exceed initial time and cost estimates. By examining twelve completed highway projects in different regions of the country, the delay encountered in most projects ranges from 25% to 75% of original contract time. According to Sambasivan and Soon (2007), the problem of delays in the road construction industry is a global phenomenon. The road construction process comprises many tasks which require monitoring and evaluation to ensure compliance with set standards. Task management in road construction assumes that certainty prevails in the road construction process Ibrahim (2013). However, it is widely observed that, due to poor monitoring in the road construction processes, intended task management degenerates into mutual adjustment by teams on site leading to non-adherence to project plans and subsequent delays Radosavljevic and Hornern (2002).

Research Objective

The objective of the study was to examine the effect of stakeholder analysis on performance of road construction projects in Elgeyo Marakwet County.

Research Hypothesis

H_{01} Stakeholder analysis has no significant effect on performance of road construction Projects in Elgeyo Marakwet County.

Literature Review

Theoretical Review

The Stakeholder Theory

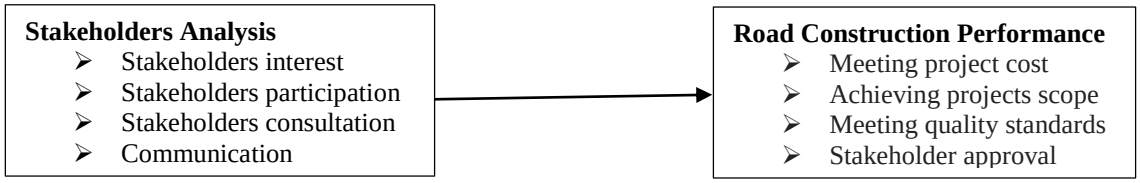
The dictionary defines a stakeholder as a person who has an interest in or investment in something and who is impacted by and cares about how it turns out. However, scholars have differing understanding of what stakeholders are; making it a contested concept Miles (2012) as a result, hundreds of definitions exist in academic literature Miles (2011). The business dictionary presents stakeholder theory as a conceptual framework of business ethics and organization management which addresses moral and ethical values in the management of business and other organizations.

This theory is credited to Ian Mitroff (1983) in his book "stakeholders of the organization mind" and Freeman (1983) in his book "Strategic Management: A Stakeholder Approach", none refers to the other's work. Both authors vouch for a regard for stakeholders during project implementation.

A common approach is to identify specific stakeholders of a company and then examine the conditions under which managers treat these parties as stakeholders, Philip (2003). For a firm to survive and be legitimate will relate to the degree it satisfies its stakeholders' needs, expectations and interest. Mellat-Parast (2015) and Odero (2017) observe that firms change to meet stakeholders demand in order to survive. This therefore means that managers are expected to meaningfully engage stakeholders; by differentiating them as groups of people with classifiable relationships with the organization, Friedman (2006). Karanja (2017) argues that involvement of all stakeholders is an absolute requirement from initiation to closure stages. She further identifies scope variation, validation of project reports, issues regarding time overruns and utilization of additional resources as areas that require stakeholder input. It is upon this mind-set that the researcher seeks to see the extent of stakeholder involvement in roads projects.

Conceptual Framework

A conceptual framework is a theorized display recognizing the model under investigation and the connections between the needy variable and the autonomous factors (Mugenda & Mugenda, 2006). This study will be based on a conceptual framework showing the relationship between the dependent and independent variables illustrated in figure 2.1.



Independent Variables **Dependent Variable**

Figure 2.1 Conceptual Framework

Stakeholders Analysis

Davis (2014) examined different stakeholder groups and their perceptions of project success. The study found that stakeholders are all those who need to be considered in achieving project goals and whose participation and support are crucial to its success. Stakeholder analysis identifies all primary and secondary stakeholders who have a vested interest in the issues with which the project or policy is concerned. The goal of stakeholder analysis is to develop a strategic view of the human and institutional landscape, and the relationships between the different stakeholders and the issues they care about most. According to Milika (2011), basic premise behind stakeholder analysis is that different groups have different concerns, capacities and interests and that these need to be explicitly understood and recognized. This is done during the process of problem identification, objective setting and strategy selection, implementation and completion, and plotted in the stakeholder analysis matrix; strength, weakness, opportunity and threats (SWOT) analysis are among the premises widely used by donors.

Erkul, Yitmen and Çelik (2016) in the study Stakeholder Engagement in Mega Transport Infrastructure Projects found that the first step in the process of stakeholder engagement is stakeholder identification–determining who your project stakeholders are, and their key groupings and sub-groupings. (Remember that certain stakeholder groups might be pre-determined through regulatory requirements). From this flows stakeholder analysis, a more in-depth look at stakeholder group interests, how they will be affected and to what degree, and what influence they could have on your project. The answers to these questions will provide the basis from which to build your stakeholder engagement strategy. Here, it is important to keep in mind that not all stakeholders in a particular group or sub-group will necessarily share the same concerns or have unified opinions or priorities.

O'Faircheallaigh (2010) discussed that Kenya's constitution clearly stipulates how communities will be engaged in development through representation in the county government hence the devolved system of governance that is all inclusive Constitution of Kenya, (2010). Stakeholder involvement is one strategy of involving community participation and constitutes a policy requirement for all public implementation of project. Globally; projects have changed in the last decade as

globalization presents a dynamic and more interactive process which is influencing everywhere. Therefore, a lot of global projects are currently executed in organizations containing completely diverse cultures, working together to reach success. This extra ordinarily and worthy phenomenon which consists of different stakeholders intervene from various points of view as well as the global project itself Annon (2010). As Aarseth (2012) pointed out the biggest challenge in global perspective is the treatment of external stakeholders. Stakeholders in general need to be considered key to success within global environment (Turner, 2007). Ferreira (1999) argued that influence of stakeholder participation on effective implementation of projects provides opportunities for public operation.

According to Carol and Morgan (2017), consultation enables us to identify and monitor trends, challenges and perceptions over time with specific groups of stakeholders. It therefore helps us to: Identify and track needs and expectations; Identify and track perceptions and attitudes; Provide feedback on specific planned developments; Evaluate implementations and actions; and Establish the brand values and positioning of the corporation as seen by others. Public services, in particular, have embraced the approach, seeking involvement of the public in the development and shaping of future services to particular communities; an acknowledgement of the need to involve service users in service development, review and policy making. Thus, consultation has become a requirement in the successful development of public policy and service. However, its use is not confined to the public and "not for profit" sector.

Beringer, Jonas and Kock (2013) studied Behavior of internal stakeholders in project portfolio management and its impact on success. The findings showed that stakeholders demonstrate different levels of responsibility and power and their role in investment project execution changes, depending on the project life cycle and they can have both a positive and a negative effect on project goals. Interestingly, identifying stakeholders is of key importance here as the process is continuous and quite complex. Ignoring the effect of specific stakeholders on project execution, may prolong the project execution time and increase the costs. The relations of stakeholders are very important and significant at each project execution stage and they have an enormous effect on the adequacy, timely manner of execution and the quality of investment in projects. Attention to such relations should be a key project risk management element and the most important task in terms of developing the construction process participants' relations in factoring in the risk of all the project stakeholders.

On the other hand, Stakeholder communication ensures the effective engagement of different stakeholders and hence plays a fundamental role in project stakeholder management (Crane & Livesey, 2003; Welch & Jackson, 2007). Communication refers to the patterns of exchanging information and knowledge between team members (Greenberg, 1999, Johns & Gratton, 2013). The goal of communication is, for example, to generate action or change or to create common understanding and goal alignment. Because the role of communication in projects is crucial, the various communication needs in different phases of the project should be acknowledged and planned (Lohikoski, Kujala, Härkönen, Haapasalo & Muhos, 2015). Furthermore, even though stakeholder communication is an integral part of actual stakeholder management processes, little empirical research exists on project stakeholder communication practices and their relation to the attributes of these stakeholders.

Njogu (2016) in the study Influence of Stakeholders Involvement in Project Performance, Identified a gap in the stakeholder involvement in the project performance. The study then focuses on specific objectives which were; to determine the influence of stakeholder involvement in project identification, the influence of stakeholder involvement in project planning, influence of stakeholder involvement in project implementation and to examine the influence of stakeholder involvement in monitoring on performance of automobile Control Project. The study found Stakeholder Involvement to be critical to the success of project performance in every organization. The study revealed that that stakeholder Involvement in Automobile emission control project enhances assessment of stakeholder resources; enhance undertaking problem analysis to understand extent of stakeholder contribution, improving decision making process and addressing the concerns of stakeholders, which leads to improved project performance.

Project Performance

Muller and Jugdev (2012) examined critical success factors in projects. Most of the researchers considered cost, time, quality, scope and stakeholders' satisfaction as the main factors which may affect project success. The eminent researchers considered that time were the most important factor. Cost was another success element of the rare project success criteria which were found to be very important in overall project success. Success could be measured by determining whether the project completed to specifications or whether the project demonstrated for the purpose only. Stakeholder's satisfaction is another pivotal factor in project

success. Whether performance measures are effective or not is always as a result of their integration into the how well they are integrated into the defined system of appraisal. Such a system requires horizontal and vertical integration. In other words, there is need to strike a balance if you need to get an accurate evaluation of a project and to combine this across projects to get a picture of the performance of the program and across programs in order to realize whether there has been an impact on the departmental level policies and procedures.

Rolstadas (2012) opined that performance is continuous, but implementers need to have a defined process of evaluation at a defined interval to evaluate performance against the agreed upon targets set at project's initiation. Transparent, pre-agreed measurements must be used when judging performance. When looking at cost as a project performance indicator, Chan and Chan (2004) define project cost as the degree to which the general conditions promote the completion of a project within the estimated budget. Project cost is not only limited to the tender sum only, but it is the overall cost that a project incurs from inception to completion, so it includes any costs arising from variations, modification during construction period and the cost created by the legal claims, such as litigation and arbitration. Niringiye and Ayebale, (2012); Ngacho, (2013) define time in project performance as being the duration from the inception of a project to its completion. They point out two time aspects in project time: planned or expected project time and actual completion time. A project experiences delay when actual project completion time exceeds the planned time. Delays have a great impact on project delivery process and usually postpone project activities. Time performance can be considered upon three measures: construction time, speed of construction and time variation (Butteris, 2010).

Kerzner and Kerzner (2017) evaluated project management. The study found that it is essential for each project to clearly define and document its scope so that the project can move forward in a coordinated manner and requirements can be written. The project management institute define scope as functional elements that, when completed, make up the end deliverable for the project. The scope itself is generally identified up front so as to give the project the best chance of success. Further although scope can potentially change during the project life-cycle, a concept known as 'scope creep'. Note that the common success measure for the scope aspect of a project is its inherent quality upon delivery.

Meng (2012) posited that Quality is another project performance indicator, it is described as the totality of features required by a product or service to satisfy a given need; fitness for purpose. In other words, quality in construction industry emphasizes the capability to establish requirements with conformance to the quality standard. Requirements will be predefined by client in contract agreement and consist of the established characteristics of products, processes, and services. All the parties involved in the project must fully understand those requirements and expectation in order to achieve a complete project that meets clients' quality expectation. Quality performance can be measured by looking into the non-conformance report (NCR) in the ISO 9000 certified company. Moreover, quality performance can be determined by taking clients' satisfaction into consideration

There have been a number of studies that examine the success of major projects citing monitoring and evaluation as significant contributor of project success. Many researchers have focused particularly on M& E factors influencing success to development projects, such as Wachaiyu (2016) focused on the strength of monitoring team , budgetary allocation, M & E plan and selection of tools and techniques and concludes that a project is acknowledged as successful when it is completed on time, within budget and within specifications and to stakeholders' satisfactions. Factors influencing performance of M & E systems of NGO in governance in another study, with parameters (data quality, human capacity, use of logical framework and utilization of M & E) concludes that Data quality, human capacity, use of logical framework and utilization of M & E information improve the accuracy, quality and access of information provided by M & E system.

Furthermore Wanyoike (2015) who examined Influence of project M& E on performance of youth funded Agribusiness projects found out that the level of training personnel, stakeholder participation and political influence play a pivotal role in determining the performance and success of youth funded projects. Gitahi (2015) looked at Determinants influencing M & E processes of Road construction Projects in KenHA (Availability of funds, availability of M & E personnel in KenHA, how other monitoring resources influences M & E and how contractor participation influences M & E) and concludes that contractual experience ,reputation ,capability, contractual disputes are ignored and at times politicization of contracts and contractors has influenced the spirit of M & E in almost all the projects in KeNHA's central region.

De-Melo (2008), in his research on "Performance Evaluation in Civil Construction: Its application to a railway work" aimed to analyse the choice of indicators used in this sector to measure performance. It isolated the monitoring indicators on

the one hand and the assessment (evaluation) indicators on the other. The case study involved level crossing for Evora and Elenjo railway line. The research concluded that a budget overrun of 18% arose due to mistakes/errors and work variations. It also had a time overrun of 36.3% in days meaning the project fell behind schedule. Whereas some works were not performed and delay occurred due to machine malfunction, this did not impact the project much.

Savitz (2013) found the material delivery was on time and environmental policies were good. Employees also rated as satisfied. The study concludes there was need for a clear strategic plan from onset to facilitate formal monitoring. The process of data recording on the majority of cases were flawed and not carried out as a policy. This, the researcher observes is a chronic problem across the construction sector. Kenyan government is investing billions of its resources in developing and opening up new road networks countrywide considering the scarce financial resources of the country. This study will therefore seek to fill the gap in understanding the contribution of M & E in performance of roads construction. The aim is to support in the design and planning processes that optimize the system's inputs.

Research Methodology

Research Design

Descriptive cross-sectional survey research design was adopted. A cross-sectional survey provides the kind and nature of information that is useful for comparison and generalization of project risk management practices (Saunders, Lewis, Thornhill, 2007). This design was relevant to this study because a broad range of information regarding roads construction projects in Elgeyo Marakwet County is required.

Population of the Study

The target population for this study were employees in the road construction sector in Elgeyo Marakwet County. These included; county government registered consulting engineers, project managers, county financial managers and procurement managers, county planning unit who constitute employees of the county government, Ministry of Transport personnel from KURA, KenHA and KERRA, Contractors and the beneficiaries of roads under focus in this research. These employees had wide involvement in most aspects of construction such as the project design, quality control and general project management roles. Further, they are also well versed in monitoring and evaluation; constituting a population of 140 within the county roads sector. The community members in focus were 19198 adults twenty years and above. Shown below is a table for the population of the study.

Table 3.1 Population of Study

Respondents	**Population**	**Cumulative target population**
Employees (County Government)	40	40
KURA	10	50
KenHA	10	60
KERRA	20	80
Constructors	60	140
Community members	19198	19338
Total	I9338	

Sample Size and Sampling Technique

A sample size is basically the number of observations that constitutes this study; it is a subset of the population of the study. The researcher used stratification to group the population into two homogenous categories. The first group was the individuals working directly on projects and the other was the stakeholders who were the community members and beneficiaries. From the population of study of 140 of this first group, a sample size of 103 respondents was selected as an adequate representation. Proportionate simple random sampling was then used to select employees in each firm to constitute the sample. The researcher then administered questionnaire by simple random sampling across the respondent categories (Starnes, 2008). Thus, 103/140 as a percentage applied across the sample categories. The second stratum selected from a target of 19198 individuals provided 377 respondents who were randomly sampled across the study area to whom an interview schedule was administered through focused group discussions. The study involved 12 groups which constituted 32 individuals each who participated in the discussions. The study employed 3 research assistants

who collected data from the groups that were clustered geographically according to the three roads under study.

Table 3.2 Sample Size

Respondents	**Population**	**Sample=$(\frac{n}{N}) * 103$**	**Cumulative sample**
Managers	4	4	4
Employees (County Government)	40	29	33
KURA	10	6	39
KenHA	10	6	45
KERRA	20	13	58
Contractors	60	45	103
Community members	19198	377	480
Total	19338	480	

Data Collection Instruments

Questionnaires

The researcher used self-administration of questionnaires because it was quicker and cheaper to administer over a geographically widely dispersed region besides facilitating easy derivation of information from respondent (Kothari, 2004). The choice of questionnaires was guided by the nature of required data, the objectives of the study and the variables that could not be directly observed.

The questionnaires were structured in a way that had both open and closed ended questions. Closed ended questions enhanced consistency of responses given across respondents besides being popular with the respondents (Fraenkel & Wallen, 2003). According to Cohen, Manion and Morrison, (2007), closed ended questions limit the breadth of responses given by participants, hence the researcher also considered some open ended questions with the aim of capturing richness, in-depth and freedom of expression from the respondents.

Interview Schedules

The interview schedule was used to get information from the community stakeholders in focused group discussions. Interviews provided in-depth data that was not possible to get using questionnaire alone (Mugenda & Mugenda, 2003). According to Oso and Onen (2005) interview is a method of collecting data that involves presentation of verbal stimuli and response in terms of oral verbal responses. The Study used interview schedule to gather data because it permitted much greater depth than other methods of data collection and to also provide a true picture of opinions and feelings; however, they were time consuming, expensive to conduct and may have had insincere answers to please the interviewer.

Pilot Test

A pilot study is a small-scale version of the study used to establish procedures, materials and parameters to be used in the full study (Borden's & Abbot, 2008). A pilot test was conducted to detect weakness in design and instrumentation and to provide proxy data for selection of a probability sample. The researcher will used 10% of the sample, which was10 (ten) and 38(thirty eight) respondents respectively administered in neighbouring Uasin Gishu County with an intention to pre-testing the questions.

Reliability

Reliability is the consistency of a set of measurement items while validity indicates that the instrument is testing what it should. Internal consistency reliability is the most commonly used psychometric measure assessing survey instruments and scales. Cronbach alpha is the basic formula for determining the reliability based on internal consistency. It is recommended that instruments used in research should have a Core Values Index (CVI) of about 0.7 (Dunn, 2014).

Validity of Instruments

Validity is the degree to which the sample of the test item represents the content that it is designed to measure. It is the strength of our conclusions, inferences or propositions. Paton (2002) defines it as the best available approximation to the truth or falsity of a given inference, proposition or conclusion. The researcher ensured validity of research instruments by using simple language free from jargon that made it easy to be understood by the respondents. The researcher also sought opinions of people who rendered intelligent judgement about their adequacy. The researcher further engaged his supervisor in ensuring that questions tested what they are supposed to measure.

Data Collection Procedure

Before proceeding for data collection, the researcher sought clearance from the University. Thereafter, the researcher visited the offices for study. The employees were notified in writing and their cooperation requested before the study. The researcher made two visits to the respondents; during the first visit the researcher distributed the questionnaires to the respondents and made arrangements with them on the convenient time to collect the completed questionnaires. In the second visit the researcher collected the filled questionnaires. For

community members, the researcher engaged three research assistants who the community members and documented their responses. To ensure that all the questionnaire items are answered, each respondent's questionnaire was cross-checked and where items that had been left out, the respondents were requested to respond to them. The filled questionnaires were then being collected for data analysis.

Data Processing and Analysis

The entire accessible population was administered to the questionnaires and interviewed accordingly. To analyse the data, the researcher considered homogeneity of the respondents who were organized and categorised as the technical personnel (KenHA-6, KERRA-6, KURA-13, county personnel -29) and the contractors (45) then community members (377. This helped process and compared responses along homogenous respondents. The study generated qualitative and quantitative data due to the nature of the instruments adopted which consists of closed and open ended questions. The researcher cleaned the data after getting the questionnaires from the field. Data was merged and tabulated on tabulation sheets on SPSS (Statistical Package for Social Sciences) Version 23 and Microsoft Excel. Data was compared to establish any existing relationships or meaningful facts by use of ANOVA. Descriptive statistics was done through percentages, means, standard deviation and frequency. Presentation of data included simple graphs, charts, tables, and frequency tables.

Inferential statistics involved the use of multiple regression model as indicated in equation 3.1.

$$Y = \beta o + \beta_1 X_1 + \rho_0 \quad \text{Equation 3.1}$$

Where;

Y represents Project Performance (dependent variable)
βo represents Constant (Coefficient of intercept)
$\mathbf{X_1}$ represents Stakeholders Analysis
ρ_0 represents Error term
β_1, represents regression coefficient of the independent variable.

The test was conducted at 95% significant level to evaluate and make conclusion about the hypothesis.

This model was used to estimate relationships among variables. It was a powerful technique used to predict the unknown value of a variable from known values of two or more variables, also called predictors. It is also used to establish which of the independent variables are related to the dependent variable, and to explore the form of these relationships. In restrictive way, it was used to infer causal relationships between the independent and dependent variables.

Research, Findings and Discussion

Response Rate

Response rate showed that out of 103 sampled respondents, 10 were not available during the entire data collection period. Thus the questionnaires were administered to and collected from 93 respondents. Then out of 377 community respondents 328 were interviewed. Therefore, the response rate for this study was 421. This represents 87.7% return rate and is presented in Table 4.1. Mugenda & Mugenda (2003) provides guidelines for the range of rate of return acceptable in research. The literature categorizes 50% as adequate, 60% as good and 70% and above as very good for analysis and reporting. The response rate of 87.7% was thus very good for achieving the objectives of the study.

Table 4.1 Response Rate

Response Rate	Population	Percentage
Administered	480	100
Responded	421	87.7

Reliability Results

Reliability is the consistency of a set of measurement items while validity indicates that the instrument is testing what it should. Internal consistency reliability is the most commonly used psychometric measure assessing survey instruments and scales. Cronbach alpha is the basic formula for determining the reliability based on internal consistency. It is recommended that instruments used in research should have a Core Values Index (CVI) of about 0.7 (Lefort & Urzia, 2008). The recommended value of 0.7 will be used as a cut-off of reliability.

The results of reliability test were presented in Table 4.2. The pilot results indicated that Cronbach's Alpha value for technical expertise was 0.809, for project risk management was 0.845, for stakeholder analysis was 0.822, for construction regulations was 0.863 and for performance of road construction projects was 0.783. This implies that Cronbach's Alpha values for all variables were above 0.7 hence the data collection instrument used was reliable.

Table 4. 2 Reliability Statistics

Items	Cronbach's Alpha	N of Items
Stakeholder Analysis	0.822	4
Performance Of Road Construction Projects	0.783	4

Background Information

Background information of the study was gender, age, job category, education level and working duration of the respondents.

Gender of Respondents

The study sought to determine gender of the respondents who participated in the study. The results were presented in Table 4.3. Showing the data collected on the distribution of the respondents by gender. From the data collected, the findings revealed that majority, 101(24.0%) of the respondents were female, 320(76.0%) of them were male, the findings therefore implies that majority of respondents were male as compared to the female, the inclusion of both genders was essential in ensuring diversity of opinion. This however fell short by 6% of the constitutional gender threshold on inclusivity. This reflects on the fact that women are yet to be meaningfully involved in public and economic system of the county.

Table 4.3 Gender of Respondents

Gender	Frequency	Percent
Female	101	24.0
Male	320	76.0
Total	421	100.0

Age of Respondents

The study sought to determine the age of respondents. Table 4.4 shows the data collected on the distribution of the respondents by age. The data collected, revealed that majority, 160(38%) of the respondents were aged between (31-40) years, 141(33.5%) were aged between (20-30) years, while 46(10.9%) were aged between (41-50) years, 54(12.8%) were aged between (51-60) years and finally 20(4.8%) were above 60 years. The findings therefore deduce that majority of the participants into the study were aged between (31-40) years. This represents the age bracket that was old enough to provide the correct information. It also indicates that the age cohort of youthful individuals is actively involved in the communal activities that relate to their welfare and livelihood.

Table: 4.4 Age Brackets of the Respondents

Age Bracket	Frequency	Percent
20-30 Years	141	33.5
31-40 Years	160	38.0
41-50 Years	46	10.9
51-60 Years	54	12.8
60 and Above	20	4.8
Total	421	100.0

Occupation of Respondents

The study sought to establish the occupation of Respondents. Table 4.5 shows the data collected on the distribution of the respondents by occupation. From the data collected as shown below, majority 150(35.6%) of the respondents were business persons, followed by 140 (33.3%) who were farmers, 34 (8.1%) who were community personnel, 10(2.4%) were pastoralists, while 8(1.9%) were monitoring and evaluation assistants and others at 51(12.1%), the findings therefore implies that majority of the respondents were business people implying that they used the road in doing their business and therefore understood the topic under the study.

Table 4.5 Job category of respondents

Job category of the respondent	Frequency	Percent
Monitoring and Evaluation officers	8	1.9
Contractors	34	8.1
Others	51	12.1
Community Leaders	28	6.7
Farmer	140	33.3
Pastoralists	10	2.4
Business Person	150	35.6
Total	421	100.0

Level of Education

The study sought to determine level of education of respondents and the results were as indicated in Table 4.6. The majority of respondents in level of education proved that they had reached certificate level with 259(61.5%), followed by diploma level by 72(17.1%), 36(8.6%) were undergraduates and finally masters level was only 8(1.9%) of the respondents. This implied that respondents were educated and they provided correct information concerning the effects of monitoring and evaluation on performance of road construction projects.

Table 4.6 Level of Education

Level of academic qualification	Frequency	Percent
Certificate	259	61.5
Diploma	72	17.1
Under Graduate Degree	36	8.6
Post Graduate Degree	8	1.9
None	46	10.9
Total	421	100.0

Working Duration

The study further sought to find out how long the respondents had been working on various aspects involving road construction the data collected were presented in the Table 4.7. From the data collected as shown in the table below, majority 156 (37.1%) of the respondents had been involved for between (1-2) years, followed by 140 (33.3%) who had been involved more than 3 years, 117 (27.8%) involved for less than a year and 8(1.9%) were not sure of the years they had been involved in road projects. By implication, majority of the respondents had been involved for 1-2 years in road construction projects.

Table 4.7 Involvement Period of Respondents

How many years have you been involved	Frequency	Percent
0-1 Years	117	27.8
1-2 Years	156	37.1
3 Years and Above	140	33.3
Not Sure	8	1.9
Total	421	100.0

Findings of Descriptive Statistics

The respondents were also requested to indicate the effect of stakeholder analysis on performance of road construction projects. Based on the findings on Table 4.10, Similar stakeholder interests influenced positively on the construction projects thus timely completion (mean = 4.150, SD = 1.03153). Consequently, Stakeholder participation provided opportunities for public involvement leading to their approval (mean = 4.193, SD = 0.83741). Precisely, Key persons and organizations with an interest in road construction were systematically consulted and engaged during project life cycle (mean = 4.462, SD = 0.91556). Furthermore, there is a proper technique on forecasting project activities where effective communication channels continually conveyed messages that were consistent with official position and intended purpose (mean = 4.2043, SD = 0.99520).

The results of the study revealed that majority of the respondents strongly believe that the stakeholder analysis have a positive effect on project performance. This implies that analysing the role of each shareholder in the roads project could help the county government in optimizing satisfaction and production. Key long-term considerations in shareholder assessment is managing conflicts and sustaining positive communication with the organization. Understanding the needs and interests of each shareholder helps the county government set up a good working environment that motivates them leading to increased performance.

The study concur with Carol and Morgan (2017) who stated that consultation enables one to identify and monitor trends, challenges and perceptions over time with specific groups of stakeholders. It therefore helps to: Identify and track needs and expectations; Identify and track perceptions and attitudes; Provide feedback on specific planned developments; Evaluate implementations and actions; and Establish the brand values and positioning of the corporation as seen by others. Public services, in particular, have embraced the approach, seeking involvement of the public in the development and shaping of future services to particular communities; an acknowledgement of the need to involve service users in service development, review and

policy making are paramount. Thus, consultation has become a requirement in the successful development of public policy and service. However, its use is not confined to the public and "not for profit" sector. The study also agrees with Muthoni (2016) who did a study on the influence of stakeholder engagement on performance of street children rehabilitation programs in Nairobi County and found out that stakeholder involvement play a critical role on performance.

Table 4.8 Stakeholders Analysis

Stakeholders Analysis	N	Mean	Std. Dev	Min	Max
Similar stakeholder interests influenced positively on the construction projects thus timely completion	93	4.1505	1.03153	1	5
Stakeholder participation provided opportunities for Public involvement leading to their approval	93	4.1935	0.83741	1	5
Key persons and organizations with an interest in road construction are systematically consulted and engaged during project life cycle	93	4.4624	0.91556	1	5
Effective communications channels continually convey messages that are consistent with official position and convey intended information	93	4.2043	0.9952	1	5

Correlation Findings

Correlation analysis was performed to examine the association between technical expertise, risk management, stakeholder analysis and construction regulations and road construction performance of road construction in Elgeyo Marakwet County, Kenya. Pearson's product –moment correlation (r) was used to explore the relationship between the independent variables and dependent variable to assess both the direction and strength. Each of independent variables and dependent variable where correlation coefficient (r=between +1 and -1) measures the strength and direction of a linear relationship between each of independent variables and dependent variable. The study findings were presented in Table 4.9.

The study findings established that there was a positive and statistically significant influence of stakeholder analysis on construction regulations ($r = 0.360$; $p < 0.01$). This gave an implication that technical expertise, risk management, stakeholder analysis and construction regulations have a positive influence on performance of road construction projects in Elgeyo Marakwet County.

Table 4.9: Correlation Matrix

		Performance of Road Construction Projects	**Stakeholder Analysis**
Performance of Road Construction Projects	Pearson Correlation	1	
	Sig. (2-tailed)	.000	
Stakeholder Analysis	Pearson Correlation	.538**	1
	Sig. (2-tailed)	.000	

Key: **. Correlation is significant at the 0.01 level (2-tailed), *. Correlation is significant at the 0.05 level (2-tailed).

Multiple Regression Analysis

The coefficient of determination R^2 value was 0.476 and it shows how much of the total variation in the dependent variable, project performance, was explained by the independent variables; technical expertise, risk management, stakeholder analysis and construction regulations. Therefore, the study results revealed that 47.6% can be explained by independent variables in relation to dependent variable. The adjusted R^2 value is 0.452 which is slightly lower than R^2 value; it is an indicator of relationship between the independent and dependent variables since it are sensitive when irrelevant variables are added. However, the typical error when the model is used to predict project performance is 0.44983. This is represented in Table 4.10

Table 4.10 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.690[a]	0.476	0.452	0.44983	1.049

Assessing the Fit of Multiple Regression Model

The study conducted Analysis of Variance (ANOVA) to examine whether the multiple regression model was fit for the data. This helped to find out if the road project performance can be predicted without relying on the independent variables. The results of Analysis of Variance (ANOVA) are shown in Table 4.21. The study findings provides F test which shows an overall test of significance of the fitted regression model. The F value indicates that all the variables in the equation were significant hence the overall regression model is significant.

From the findings in table below the results show that the model had an F ratio of 19.948 and the p value was 0.000<0.05, implying that the F ratio was statistically significant, therefore the overall regression model for stakeholder analysis was statistically significant and can be used for prediction purposes at 5 % significance level, this further indicate that the variables used in this study are statistically significant.

Table 4.11 ANOVA for Testing Multiple Regression Model

	Sum of Squares	Df	Mean Square	F	Sig.
Regression	16.146	4	4.036	19.948	.000
Residual	17.806	88	.202		
Total	33.952	92			

Regression Analysis Coefficients

The study conducted t-test of statistical significance of each individual regression coefficient and results are presented in Table 4.12. The findings indicate that all the t values were significant implying that independent variable is a predictor of the dependent variable stakeholder analysis (t=3.706 p< 0.00). From the Table 4.12 the regression model can be written as:

Y=.924 + 0.231X4+ ε ……Equation 4.1

This can be translated to;

Road construction Performance = 0.924 + 0.203(stakeholder analysis).....**Equation 4.2**

Based on the above, the predictor variables technical expertise, risk management, stakeholder analysis and construction regulations that are statistically significantly predict the criterion variable, which is the performance of road construction projects in Elgeyo Marakwet County, Kenya.

Table 4.12 Regression Analysis Coefficients

	Unstandardized Coefficient		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	.924	.429		2.152	.034
stakeholder analysis	.203	.055	.322	3.706	.000

Hypotheses Testing

In this study, all the four hypotheses were tested where p value of less than 5 shows there was significant relationship between the variables and null hypothesis was rejected while p value of more than 0.05 shows there was no significant relationship between study variables and we fail to reject the null hypothesis. The study findings were presented in Table 412.

The third null hypothesis stated that **H_{01}** stakeholder analysis has no significant effect on performance of road construction projects in Elgeyo Market County. However, the study found out that there was a positive and significant effect between stakeholder analysis and performance of road construction projects in Elgeyo Market County ($\beta_3=0.203$, $p<0.05$). Thus the null hypothesis was rejected and concluded that stakeholder analysis affects performance of road construction projects in Elgeyo Market County positively. This is because analysing the role of each shareholder in the roads project could help the county government in optimizing satisfaction and production. Understanding the needs and interests of each shareholder helps the county government set up a good working environment that motivates them leading to increased performance.

The study concur with Carol and Morgan (2017) who stated that consultation enables one to identify and monitor trends, challenges and perceptions over time with specific groups of stakeholders. It therefore helps to: Identify and track needs and expectations; Identify and track perceptions and attitudes; Provide feedback on

specific planned developments; Evaluate implementations and actions; and Establish the brand values and positioning of the corporation as seen by others. The study also agrees with Muthoni (2016) who did a study on the influence of stakeholder engagement on performance of street children rehabilitation programs in Nairobi County and found out that stakeholder involvement play a critical role on performance.

Summary of Findings, Conclusions and Recommendations

Summary of findings

This section presents a summary of the findings as per the research objectives and the research questions. The study findings indicated stakeholder analysis has a positive effect on road construction projects. This implies that analysing the role of each shareholder in the roads project helps the county government in optimizing satisfaction and production. Key long-term considerations in shareholder assessment are managing conflicts and sustaining positive communication with the organization. Understanding the needs and interests of each shareholder helps the county government set up a good working environment that motivates them leading to an increased performance. Kenya adopts public participation as a policy which facilitates consultation that enables project implementers to identify and monitor trends, challenges and perceptions over time with specific groups of stakeholders. This approach that seeks involvement of the public in the development and shaping of future services to particular communities acknowledge the needs to involve service users in service development, review and policy making. Thus, consultation has become a requirement in the successful development of public policy and service.

Conclusions

The study also concluded that the study stakeholder analysis and road construction performance had significant positive correlation coefficient. We can therefore conclude that the study variables that is stakeholder analysis and road construction performances of Elgeyo Marakwet were highly correlated.

Policy and practice

The county Government of recommends that key long-term considerations in shareholder assessment are managing conflicts and sustaining positive communication. Understanding the needs and interests of each stakeholder helps the county government set up a good working environment that motivates them leading to an increased performance. The study recommends policy makers to develop policies which will guide road contractors in road project activities. Hence, establish a favourable environment for implementations of road projects and policies. The study recommends the adoption of Human Capital Theory in road construction. This is because the theory explains the overall investment to the organization's human resource which shouldn't be seen as consumption. Further the theory aims to support variables such as technical expertise, knowledge, experience, resource allocation and personnel capacity.

Theory recommendation

Human capital theory hypothesizes that the stock of knowledge, habit, social and personality attributes are embodied in the ability to perform including creativity in labour so as to produce economic gain. The theory thus recommends investment in human resource in order to develop skills. This is an expensive undertaking for any organization. However skills are important to enhance performance in the long term. The county governments are encouraged to establish long term programme for capacity development, skills acquisition and retention this in the long run will ensure quality performance of construction projects.

Research for further study

The study recommends further study to be done on the effectiveness of adequate plant and equipment on performance of roads. This is attributed to fast technological changes and equipment used as observed that was inadequate equipment and tools of work to facilitate proper conduct and supervision of project work. The study also recommends further an assessment to done on the influence of planning on road performance specifically with regard to the insurance cover on the risks. It is further recommended an investigation be done on compensation for the people displaced or affected by the construction projects.

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