

# **CRITICAL SUCCESS FACTORS IN THE IMPLEMENTATION OF ROAD PROJECTS IN WAJIR COUNTY, KENYA**

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## **ABSTRACT**

Roads are the most common mode of transport in the county despite their poor state. Even though the road network has improved since the county government came into place, most of the roads are still rendered impassable during rainy season thus curtailing all movements by road within the county. Wajir County is one of the counties facing with poor road conditions whereby during the rainy season the county is cut-off from the rest of the country. Even though the First County Integrated Development Plan 2013-2017 showed that 40 projects aimed at improving the road conditions had been proposed, the County Annual Development Plan 2016/17 showed that only 4 of these were ongoing and the rest were behind schedule. This raised issues pertaining to the commitment of the County Government which continued to propose new road projects when a large number of the previously stipulated projects were yet to be implemented. The purpose of this study therefore, was to assess the critical success factors in the implementation of road projects in Wajir County, Kenya. The study sought to examine the influence of contractors' competencies/capacity, resource mobilization, target beneficiary participation, political goodwill and governance and monitoring and evaluation on the implementation of road projects in Wajir County. The study was founded on the theory of project management, participatory development theory and the program theory. The study adopted a descriptive research design. The study targeted 5 county officials under the transport and infrastructure department, 280 project management committee members drawn from the various road projects in the county, 27 registered

road contractors involved in the various road projects in the county as well as 300 local community leaders representing the local residents who are the target beneficiaries of road projects drawn from various project and development committees in the county. The study used primary data collected using a structured questionnaire. The data collected was analysed using quantitative method. Statistical Package for Social Sciences was used to analyse the data. Both descriptive and inferential statistics were extracted. A multiple regression model was used to show the relationship between the independent variables and the dependent variables. The study found that contractors' competencies/capacity, resource mobilization, target beneficiary participation, political goodwill and governance and monitoring and evaluation positively and significantly influence the implementation of road projects in Wajir County. The study found that resource mobilization had the largest influence on the implementation of the road projects in the county followed by contractors' competencies/capacity and then monitoring and evaluation. The study concluded that if the county was to witness improved implementation of road projects in the county, emphasis had to be placed on enhancing the level of contractors' competencies/capacity, resource mobilization, target beneficiary participation, political goodwill and governance and monitoring and evaluation throughout the project lifecycles. Several recommendations were made among them the establishment of structures and guidelines which are adhered to during the selection of road contractors and that measures are put in place to tame corruption and political influences in awarding of contracts. The study also recommends the

need for established system where the details and track records of road contactors are kept and integrated so that tracking of their delivery is made easy. The study further recommends that the county government should devise innovative ways of raising extra local funds to supplement

the total funds from the central government and there should be diversification of sources of funding for road projects.

**Key Words:** *critical success factors, implementation, road projects, Wajir County, Kenya*

## **INTRODUCTION**

The pace at which any nation is growing economically can be measured by its development. This pace can be evaluated in very many ways including physical infrastructures such as buildings, roads and bridges. A key factor that ensures economic development is adequate supply of infrastructure. This is evident in academic literature (Rutkowski, 2009) and also the policy debate (World Bank, 2016). Academic research works have been done to gauge the contribution of infrastructure development to growth and productivity. These research works had taken place in the last two decades and their emphasis was on theoretical and empirical analysis. In the recent past, the impact of infrastructure on poverty and inequality has been considered (Calderón & Servén, 2010; 2014).

A major constraint to doing business is poor infrastructure. This was identified in the Economic Recovery Strategy (ERS) for Wealth and Employment Creation 2003-07. Infrastructure has also been recognized as a sustained development under the economic pillar by the Kenya Vision 2030. Economic growth, poverty reduction as well as wealth and employment creation have been attributed to the existence of good and well-functioning road network. Therefore, the attainment of the 'Vision 2030' goals, Sustainable Development Goals and Kenya's Economic Recovery Strategy for Wealth and Employment Creation Strategy highly depend on the Ministry of Roads. The ministry can help in the attainment of these goals by providing basic facilities to citizens through the development, maintenance, rehabilitation and the management of all road networks in the nation (Mbaabu, 2012).

Priority in infrastructure development has been directed to the major road projects whose implementation is as stipulated in the 'economic pillar'. According to the ministry of Roads Service Charter (2008), road transport caters for 80% of all cargo and passengers in the country. This shows the immediacy of having improved roads to a better condition is vital. The government has in the past increased the budget allocation to the road-sector due to its importance in the socio-economic development in the country. The roads function is a shared responsibility with the introduction of devolution in the country. The responsibilities of the national government are constructing and maintaining national trunk roads. The county roads are catered for by the county government (Kajwang, 2016). Counties are now in a better position to deliver social services as they deal with specific challenges and have the local knowledge to address them unlike the national government. The specificity in the challenges has enabled the county governments to set aside funds that are required in constructing,

rehabilitating and maintaining of roads in the county. 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 (Adek, 2016).

Agyeman (2010) points out that projects identification and implementation have been the core operational centre of almost all the world's leadership and governments since ancient times. With the emergence of devolved government, it is possible to improve efficiency and effectiveness of internal projects within the County government and to relocate government services from central government offices to County closer to the citizens. According to UNDP (2012), simple examples of how devolution of projects was essential and is still essential in the world today are exemplified by the Egyptian and Syrian ancient agrarian periods. ALGA (2010) in support to this argues that for projects to benefit the total population of every country, devolution and decentralization of operations and implementation of projects is inevitable and has to be taken into reality. Managerial and organizational problems have been known to hinder the achievement of these goals. Studies have proven this theory (Ika, Diallo, & Thuillier, 2012).

## **STATEMENT OF THE PROBLEM**

There is a revelation that there have been many more failures than successes in the implementation of projects especially in the developing countries. This was recorded by an examination of post-world-war planning history (World Bank, 2010). The government and citizens are concerned as most projects fail at the implementation stage. Road projects in Kenya are seldom completed within the stipulated timeframe. Most of them get completed as late as between 2-5 years later or even end up stalled (Ministry of Planning, 2014). The completion of most of the road projects in Kenya hangs in the balance due to a combination of shoddy work characterized by inadequately funded and ill-equipped contractors compromising the quality of work being done, running behind schedule and having high cost overruns (GoK, 2015; Nyabaro, 2015). Many roads record poor performance at the end in the past (Njenga, 2014). With the emergence of devolution in Kenya, it was expected improved efficiency and effectiveness of delivering social services would be achieved within counties. However, this has not been the case. 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 five counties where it was 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 failed to the tune of 48.25% in these counties. Wajir County is one of the county that faces the hardest conditions during the seasons as most roads are completely impassible. It is even cut-off from the rest of the country. Despite the poor state of the roads, they remain the most common mode of transport in the county. There has been a slight improvement on the road networks since the devolved government came into place. However, most roads cannot be accessed during the rainy seasons hindering movement in the county. The welfare of the Wajir residents is impacted negatively due to the situation. Markets are inaccessible during the rainy seasons due to the poor infrastructure. There are

huge losses of agricultural products and livestock since they cannot reach the market. A big hindrance to market access and also price trends are caused by inadequate market information (Wajir County Government, 2016). Even though the First County Integrated Development Plan 2013-2017 showed that 40 projects aimed at improving the road conditions had been proposed, the County Annual Development Plan 2016/17 showed that only 4 of these were ongoing and the rest were behind schedule. This raised issues pertaining to the commitment of the County Government which continued to propose new road projects when a large number of the previously stipulated projects were yet to be implemented. The Plan showed that 12 new road projects/ programs had been proposed and were to be implemented in FY 2016/17. Furthermore, an assessment of one of the flagship projects for upgrading of roads within the Wajir Township by the auditor-general showed indication that there was slow progress and the projects were behind schedule and that some of contract payments were made before work was done resulting in overpayment of the contract sum. Hence, it was important to conduct an assessment of the factors within the County which led to the slow progress in the implementation of these projects. A performance and implementation of road projects in Kenya have been reviewed in the existing literature. However, some of the close studies for instance that of Mbaabu (2012), Oguya and Muturi (2016) and Kinaro (2015) focused on road projects under the mandate of the national government. Other such as that of Njenga (2014) and Nianjun (2014), even though they focused on projects within the county of Nairobi and Nyeri south sub-county respectively, the focus was more on the construction sector as an industry which was different from the focus of this current study. Literature on the implementation of county projects for roads in Wajir County was scanty. Therefore, this study sought to fill this gap by conducting an assessment on the critical success factors in the implementation of road projects in Wajir County.

## **GENERAL OBJECTIVE**

The purpose of this study was to assess the critical success factors in the implementation of road projects in Wajir County, Kenya.

## **SPECIFIC OBJECTIVES**

1. To examine the influence of contractors' competencies/capacity on implementation of road projects in Wajir County.
2. To establish the influence of resource mobilization on implementation of road projects in Wajir County.
3. To determine the influence of target beneficiary participation on implementation of road projects in Wajir County.
4. To explore the influence of political goodwill and governance on implementation of road projects in Wajir County.

5. To find out the influence of monitoring and evaluation on implementation of road projects in Wajir County.

## **THEORETICAL REVIEW**

### **Theory of Project Management**

Project management as espoused in PMBOK by PMI was explored by Koskela and Howell (2002). According to their study, the foundation was divided into two: theory of management and theory of project which involves transformation view on operation that conceptualizes projects as transformation of inputs to outputs. The study explains the findings of a number of principles of how a project can be handled.

The suggestion of one of the principles is decomposing the total transformation hierarchically into smaller transformations, tasks and minimizing the cost of each task independently. Management outlined by Koskela and Howell (2002) is explained in three theories; thermostat model, dispatching model and management-as-planning. Management-as-planning consisted of creation, revision and plan management. It is a key factor of action in management and organizational outcomes. Dispatching model played the role of planned task can be executed by just notification from the task executor. Third was the thermostat model which played a major role of standard performance which was measured by output.

According to Koskela and Howell (2002), standard and measure is used to correct the process so to meet the standard value. Project management is a cycle that views a project life cycle as consisting of project design, planning, implementation, monitoring and control, initiation and project closure (PMI, 2013). Under the current study, Wajir County road projects' had to undergo through a life cycle where they were initiated, designed, planned and implemented. The projects are facilitated and financed by donors and tax payers. The Kenyan taxpayer project finances are supposed to be used effectively to enable successful implementation of the county road projects. It is further argued that it is apparent that a number of determinants are capable of influencing the implementation of projects if not handled with care. These include among others late disbursement of project funds, failure to involve stakeholders and citizens, political interference, use of incompetent project managers, contractors and staff, and escalation of costs due to inflation among others. The completion of the road projects in Wajir County is dependent on the achievement of the projected outputs as illustrated by the project management theory.

This theory was relevant in this study since it highlighted how several factors among them project funds, contractors' capacity/competency, involvement of target beneficiaries and politics influenced the life cycle of projects which project implementation is a part of. Therefore, this theory backed the general objective of the study which was to assess the critical success factors in the implementation of road projects in Wajir County.



## **Participatory Development Theory**

Chambers (1997) opined that participatory development theory seeks to ensure the inclusion of local beneficiaries of a public infrastructure project into the activities of the project implementation. Further that the project's participatory planning must take into consideration the local population which in this case are the Wajir county residents to enable the public infrastructure development (county road projects) 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 (1997) therefore devices a means of planning in development at the local level which must involve the local 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 local population's, who are also the local recipients of the projects, ability to be self-determining in the implementation of the public infrastructure projects in this case county road projects.

The theory formed the basis for the third objective of the study which sought to determine the influence of target beneficiary on the implementation of road projects in Wajir County. The theory was fundamental in highlighting the manner in which the Wajir County residents who were the target beneficiaries in these road projects could be involved in the entire process of implementing these projects and how such undertaking supported the success of these projects.

## **Program Theory**

Evaluation done by identifying key program elements and articulating how these elements are expected to relate to each other is guided by Program Theory (Donaldson & Lipsey, 2003). The measurement of the extent and nature of each element's occurrence is done by making plans of data collection within the framework. The data is analyzed within the framework once collected. Data collected from different sources or through different methods from the same program element is first of all triangulated. A model presented by (Donaldson & Lipsey, 2003).

Stake (1967) seeks to describe the intended antecedents (whatever needs to be before a program is operational), transactions (activities and outputs), and outcomes of a program. A comparison is done between what was intended and what the standards are for that kind of program in the data of the program in operation. A recommendation of using path diagrams to model the sequences of steps between a program's intervention and the desired outcomes

was proposed by Weiss (1972). The evaluator is able to identify the variable to include in the evaluation thanks to this model. This model also helps one discover the chain of events breaks down from the sequence and stay in line with the changes in the program implementation that may affect the pattern depicted in the model.

The evaluation practice today in the construction of a plausible and sensible model of how a program is supposed to work is defined by Program Theory (Pilcher, 2012). It also defines how the transformation on input and output in the set of propositions and what goes on in the black box. That is, the transformations of a bad situation to a better one through treatment inputs (Lipsey, 1993). The process through which the program components are presumed to affect outcomes is another way to look at it.

Program theory consists of the organizational plan which deals with how to garner, configure, deploy resources and how to organize program activities. This definition is by Rossi (2004) cited by Pilcher (2012). This is so that the intended service system is developed and maintained. This plan looks at how intended target population receives the intended amount of the intended intervention is the other way that deals with service utilization. This is done through program service delivery system. The intended interventions for the specified target population bring about the desired social benefits (impacts) is also looked at in the theory. Advantages of the theory based on framework that intends to monitor and evaluate includes being able to attribute projects outcomes to specific projects is identified by Rogers, as cited by Patton (2008). He also identifies unanticipated and undesired program or project consequences. Therefore, the evaluator is enabled to tell why and how the program is working according to based evaluations.

There is a lot of confusion caused by trying to intimately link monitoring and evaluation in project management functions (Crawford & Bryce, 2003; Patton, 2008). The two are distinct but complementary. In evaluation practice, this theory plays several important roles. Initial needs assessment and program design can be met through theory and prior research. Knowledge may turn up about effective strategies for dealing with problems by a careful examination of available literature which includes primary studies. Program designers' time and resources may be saved from the lessons on what works and what does not work. The theory gave the framework for monitoring and evaluating road projects which makes it relevant. It also explained the importance of this exercise in ensuring that projects were implanted in the proper manner; in this case, Wajir County.

## **EMPIRICAL REVIEW**

### **Contractors' Competencies/Capacity and Implementation of Road Projects**

Opuch (2016) assessed the manner in which project completion was affected by local contractors' performance management in the case of the Uganda National Roads Authority Lira Station. The study employed a cross-sectional survey design which adopted mixed methods. The study found that technical capacity, selection criteria and the financial capacity of contractors affected the completion of road project under study. The study found that



contractors were judged according to their performance, their ability to manage resources, improve employee capabilities through training, time management and ability to work as a team. The study found that contractor's performance affected the stakeholders' satisfaction, timely delivery and quality of work undertaken.

Mydin, Sani, Taib, and Mohd (2014) evaluated and identified the findings and the aftermath of delayed project in Malaysia in private housing development project. The study was based on an online survey involving several developers. The study found that financial problems of the contractor were a cause of delay in the projects under study. The results revealed that after the contractors received advance monthly payment it led to the delay of the project because they started to work on other projects. The study also found that contractor coordination projects with other parties were also a cause of delays. Another cause of delays in projects was poor management skills from the contractor. The delay led to time overrun, differences in opinion, cost overrun, legal actions negotiations and total abandonment.

According to Kimemia (2015), he investigated project delay in construction industry in Kenya. The study found that contractor's experience significantly influenced the delay of construction projects in the road sector. The study found that contractor's planning and authorization experience and channels used by the contractor influenced completion. The study findings found that contractors had poor distribution of labour, poor site management and lacked good technical & managerial skills to run the project. The study recommended that the experience of the contractors should be scrutinized, their track records be well understood and proper procedures of testing these contractor's experience be checked.

Aje, Odusami, and Ogunsemi (2009) explored management capability in cost and time performance from contractors in construction projects in Nigeria. A descriptive research design was used. The results revealed that having management capability as a contractor played a major role in cost and time performance in construction projects. The study recommended that before awarding contractors with tenders, management capability should be assessed during prequalification.

Gudah, Omboto, and Tubey (2017) examined the degree to which contractor selection criteria influenced implementation of commercial housing projects in Kisumu County, Kenya. Descriptive survey design was used in this study. According to the study result, the competency of the supervisor, contractor experience in doing a similar work together with the competence of project team was the most significant criteria that were considered during contractor selection process. This was so because despite funds and approvals being there, a competent person/organization had to be competitively recruited to implement the commercial housing project. However, other factors such as category of contractor based on National Construction Authority (NCA), subcontractor's qualification and financial liquidity of the contractor were often looked at. Generally, contractor selection procedures were often utilized before implementation of commercial housing projects in Kisumu County, Kenya. The study learnt that contractors play an integral role in the implementation of housing projects. If they cannot perform their independent roles efficiently regardless of the competence of the project team, project implementation would be unattainable. The study

recommended that there was need for consideration of previous contracts undertaken by a particular contractor before engaging them to implement a new project.

Kogi (2013) investigated the factors influencing the effectiveness of implementation of the Economic Stimulus Programme (ESP) considering the case of construction projects in Nairobi County. The study made use of a descriptive survey design. The study discovered that contractors' selection process was a factor that had an influence on effectiveness in implementation of construction projects. The noted that the criteria for selection included contractor's financial capacity; technical capacity; contractor's bid/lowest bidder, past experience in terms of size and type of projects, past relationship with clients/contractors and management resource both formal and informal. The study found that it was critical and necessary to find a successful and qualified contractor. The study highlighted that a client may in addition want assurance from the tenderers (contractors) on the contractors' financial stability, technical capacity, experience and management experience. The study concluded that improper selection of contractors led to implementation delays and additional costs due to non-quality.

### **Resource Mobilization and Implementation of Road Projects**

Murithi, Makokha, and Otieno (2017) assessed the factors affecting timely completion of public construction projects in in Trans-Nzoia County, Kenya. The study adopted a descriptive survey research design. The results of the study showed that project resource allocation had a significant influence on timely completion of public construction projects. The study found that allocation of adequate resources affected project success. Financial problems and payments problems of completed work had actually led to project delays. Lack of adequate resources led to delays in procuring construction materials. The study recommended that the county government should ensure adequate resource allocation for all the projects they are undertaking.

Adek (2016) sought to find out the determinants of successful projects implementation in Mombasa County. A descriptive research design was used. The study found that resources significantly influenced the implementation of projects in the county. The study found that money provided by the county government for expertise and the entire implementation process was not enough and that salaries paid to county projects employees were not sufficient. The study highlighted that county governments had comparatively limited resources and greater difficulty in accessing to funding sources, they were also more dependent on support from the central government, had low income sources from the taxes at county level, they had limited innovation in sourcing for more funds, had less adequate budget control system, employed less or non-experienced personnel and lacked economies of scale in their operations. This in turn had limited their operations, quality of delivery and effectiveness in projects delivered.

Wambui, Ombui, and Kagiri (2015) investigated what was affecting road completion projects in Nairobi City County. The study applied a descriptive research design. The study population comprised of 2000 members of staff working in KURA in Nairobi. The study

findings showed that project funds positively and significantly influenced the delay of the road projects. The study found that adequacy of funds, their availability, management of the funds, cost saving and accessibility of the influenced the completion of the road projects under study. The study suggested the need for effective resource mobilization approaches and assessment of capacity needs for effective completion of the road projects.

Effect of project resource mobilization was investigated by Maendo, James, and Ngugi (2018), in the Lake Basin Region in Kenya, where 41 roads were construction projects was undertaken by a local firm. The study found that mobilization of financial resources had significant positive results on accomplishment of roads construction projects. The results further revealed that local firms were unable to mobilize resources to the road projects due to financial constrain. This study concluded that resource availability was a very important factor for success of the road construction project. The study recommended that management skills and correct use of the resources plays a major role to ensure completion of the project within the given budget cost.

Onyango, Bwisa, and Orwa (2017) assessed the critical factors that influenced the achievement of public road construction projects in Kenya in the case of Thika Sub-County. The study used a descriptive survey research design. The study found that the funding process significantly affected the implementation of the projects under study. The study highlighted that it was crucial for the funding process to take into consideration a budgeting plan for mitigation of risks and externalities. The study also emphasized that long-term success and sustainability of the project funding lay with the engagement of project consultants and the direct beneficiaries and that funding processes that considered stakeholders in the short-term and long-term led to effective implementation of the projects. The study also found that commitment and continuity of lead financier of a project determined its implementation speed and quality. In addition, clear description, testing and external validation of public infrastructure funds determined its potential and that aligning project funding process to economic and environmental benefits enabled smooth implementation. The study recommended that for full implementation of the projects, the funding process needed to be take into consideration with specific outlines on the main funding source, the minor and the emergency funds for the project. The usage of these funds also needed to be well outlined in the funding process to gag on misuse and under or over spending by overzealous project management implementers.

Abdalla and Otieno (2017) investigated the determinants of achievement of county government projects using a case of infrastructural projects in Kilifi County, Kenya. The study adopted a descriptive survey design. The findings showed that project funding level had a significant relationship with implementation of the infrastructure projects in the county. This could be seen as either funds being availed in good times, being enough to fund the project as well as good flow of funds in the projects to finance project activities. The study highlighted that insufficient capital, delays in receiving the advance payment, financial resource management, progress payment behind time and delays in payment of completed works affected the implementation of the projects. The study found that contractors did not

have strong financial background to keep the work in progress and therefore, when the contractors' cash flow was significantly affected, it led to delay in procurement of resources which consequently affected the time and cost performance of projects and hence adversely affected the implementation of the projects.

### **Target Beneficiary Participation and Implementation of Road Projects**

A study was done by Karuti (2015) who explored the benefits of effective monitoring and evaluation of Kiabaibate-Nchura (in Tigania) West Sub-County water project in Kenya. The study employed a descriptive survey research design. The study found that beneficiary participation (measured by beneficiary's level of knowledge of goals and objectives, activities identification, identification of measurements of progress and participation in reporting of results) were significantly related to the monitoring and evaluation of the projects under study. The study however found that beneficiaries' participation in the project activities was low. Beneficiary participation in the project activities was found to be essential for the sustainability of the project. The study recommended that the management should, on regular basis, expose the beneficiaries to the financial reports for increased transparency and accountability. It was anticipated that information gathered would enable communities understand the nature of CBWPs and further support management committees, the government and donors in the adding value in the way in which they engaged with the CBWPs.

Ngondo (2014) investigated CDF projects in Kenya about management process and time used to complete the projects. According to the findings the highest effect on timely completion was implementation of project, followed by project identification, while project monitoring & evaluation had the least effect of timely completion. The study revealed that decision making was aided by a focus group to recognize the problem and what was needed for improvement. The study concluded that update and progress was not communicated by the project implementation team and they were not reporting to the CDF projects planning and implementation team.

Mwobobia (2013) evaluated the influence of local community involvement in project planning on the sustainability of projects in Embu County, Kenya. A descriptive study design was adopted. The study found that people who were involved in spring up with objective of the project were sponsors, managers and project workers. The study further unveiled that the community were not involved in the spring up of the project and its specification. This showed that there was no proper communication between the community and the project management team in Embu County. It also showed that they did not include the community member during resources mobilization for carrying out of the project. The only resources they contributed to the community were man power, raw material and financial resources in small portion. This coursed negative effect within the project in Embu County. The result found that due to not involving the community it led to late completion of the project, inefficiency use of the resources and lack of satisfaction of client (community members) in all aspects expected and hence negative effects on project sustainability. The study

recommended that there is a need to involve the community members at all phases of the project and in resource mobilization and the need for stakeholder needs analysis.

In their study, Ndunda, Nyang'au, and Mbura (2017) examined the influence of stakeholder activities on implementation of rural road projects in Machakos County. They determined the influence of project beneficiary assistance on the implementation of road projects in the county. A descriptive survey design was adopted. The study found that project beneficiary participation positively and significantly influenced the achievement of road projects in the county. The study found that beneficiary participation led to high project acceptability which led to the projects being completed at the required time limit. It also led to involvement of the beneficiaries in the decision making processes ensuring that their needs are taken into consideration. This made it easy to implement road projects.

Ibanga, Shukla, and Eugene (2016) sought to find out “the effect of beneficiary assistance in project monitoring and evaluation on project success using the case of KWAMP project in Kirehe district, Rwanda. The study did employ a descriptive research design. Most members were aware of the goals and objectives of the project and slightly above average participated in most activities except in developing guideline used in reporting and in reporting the project performance. Most members fully and actively participated in monitoring and evaluating how the finances meant for their project were being used. Such beneficiaries’ participation was found to significantly affect the project success as it enhanced transparency and accountability among all the parties” involved.

### **Political Goodwill and Governance and Implementation of Road Projects**

Kinyanjui, Bulitia, and Machogu (2016) sought to find out the extent in which governance affected the implementation of CDF projects in Kiharu Constituency. The study used a descriptive research design. The study found that governance standards significantly affected the implementation of CDF projects in the constituency. The study found that members of the local communities were given a free hand to determine the projects to be undertaken in their localities. It was also found that CDF gave great consideration to the local needs as a premise of decision making with regards to the projects undertaken in the localities. The study further found that local communities in most cases took a common approach as regards the project choice thus an indication of the fact that communal interests were the guiding parameter in project choice determination. Local communities were assertive enough to readily participate in public forums to determine the projects to be undertaken and this enhanced the communities’ ownership of the programs. Local communities were duly engaged in the decision making processes in the projects carried out to ensure successful implementation. Participation by local communities played a great role in enhancing social audit capacity in the wake of assuring the delivery of sound programs. The governance practices of CDF should equally be fully implemented with regards to the provisions stipulated in the act. Emphasis should be placed on enhancing the stakeholder participation via public forums effectively advertised for all and sundry.



Adek (2016) sought to establish the influence of governance in the implementation of infrastructural projects in Mombasa County. A descriptive study design was applied. The study found that governance significantly affected the implementation of the projects under study. The study found that politicians were very central in the procurement, resources allocation, mobilizing people and many more for their personal gains. Others were said to have promoted favoritism, nepotism and even biased hiring that at the end of the day ensured that nonqualified personnel were employed in the department. Based on the responses given, it was found that in essence powerful stakeholders, who were politically, socially and economically dominant, for their own interests thwarted the participation of their counterparts, and influenced the selection and planning of projects to favour their personal interests. The study recommended that the local politicians, the local and national leaders should keep politics, nepotism, tribalism and corruption out of projects.

Zakayo (2017) assessed the factors influencing the implementation of water projects under the devolved system of governance in Kenya using a case of Meru County Government. The study employed descriptive survey research design. The study established that political goodwill influenced the implementation of water project under study. The study revealed that bureaucracy in tendering was major hindrance to the implementation of water projects in Meru County, some water projects in Meru County had stalled as result of political patronage. The study found that high levels of bureaucratic tendencies in the identification of water project contractors characterized by clientelism did have a negative influence on the implementation of water projects. Therefore, the study recommended strong policies that would help curb political selfishness which impeded implementation of water projects under the devolved system.

Maritim (2013) carried out an investigation into the factors influencing the implementation of CDF funded projects in Bureti Constituency, Kenya. The study adopted a descriptive survey research design. The study established that governance had significant influence on implementation of the projects. The study revealed that PMC leadership had strong contribution on implementation development projects. This notwithstanding, the study found out that most projects did not depict effective leadership styles, for over half of the projects rarely conducted regular elections. The study recommended that the department of social development needed to strengthen regulatory measures to ensure that group elections were being conducted yearly. This would enable project members to replace ineffective leaders so that when elected in office, officials would strive to perform well in order to be re - elected.

Ogeno (2016) evaluated the factors influencing completion of construction projects in Kenya in the case of government buildings construction projects in Nairobi County, Kenya. The study adopted a descriptive survey research design. The study found out that the political interference, political hand in funds disbursed per project and management autonomy played a critical but poorly understood role in determining the success or failure of the completion of construction projects. The study found that politicians were elected by citizens to decide public policy, including the delivery of public projects. Nevertheless, the stakeholders relied upon by the project also had their own agenda and preferences for participating in the project.



The relationships to the project by these stakeholders can vary from very supportive to antagonistic, but depending on their field of influence, must be considered and managed. The study found that political turmoil which led to disruption of the project. The study recommended that politicians and leaders should offer the necessary support and goodwill to enhance timely completion of construction projects. White elephant projects and unnecessary influence and political interference on project completion should be deterred.

Adan (2017) evaluated the factors that affected the achievement of road project in Isiolo County. The study adopted a descriptive survey design. The study found that politics had a strong negative effect on the achievement of these road projects. The study found that politicians were keen to influence the awarding of tenders by receiving bribes for the tenders to be awarded to the bribe giver or pressuring the government to award the tenders to specific individuals. This led to complications in the monitoring and evaluation processes, payment for work done and holding the contractor accountable for the final product of the project. The study found that politics were prevalent in all the phases of the project right from the advertisement to completion. The end result of political interference was poorly constructed roads that did not offer the residents value for their money.

Monyoncho (2015) assessed the determinants of implementation of government funded construction projects in Lamu County, Kenya. The study adopted a descriptive survey design. The study found out that good governance was essential in the implementation of projects in Lamu County. The study highlighted that project governance set a firm framework which guided project success, creating transparency and confidence in decision making, clarity of roles and responsibilities and consideration of stakeholder interests. The study found that poor governance from the side of project managers led to engaging less qualified project teams, imprudent use of resources and hence compromise on project implementation.

### **Monitoring and Evaluation and Implementation of Road Projects**

Barasa (2014) investigated the influence of monitoring and evaluation tools on project completion in Kenya using a case of constituency development fund projects in Kakamega County, Kenya. The findings showed that monitoring and evaluation tools had an influence on project completion. Precisely, the study noted that strategic plan, observed logical framework, budget and stakeholder analysis had high effect on the completion of projects under study. The study concluded that there was need to incorporate these tools in project management.

Jha and Iyer (2016) assessed the “critical factors affecting quality performance in construction projects in India. A descriptive survey design was applied. The study found that proper monitoring and timely feedback helped in controlling the workmanship and they enhanced the quality of a project. If each part of the activity of a project was monitored effectively and instances of poor workmanship and improper usage of resources – be it material, labor or plant and machinery – were reported promptly, it aided in achieving the desired quality level. Committed participants would stick to the quality plan and they would follow the accepted technical practices to carry out the different project activities.

Mwangu and Iravo (2015) investigated how monitoring and evaluation contributed in success of Constituency Development Fund Projects in Kenya in the case of Gatanga Constituency. The results of the study revealed that the repetitiveness of the project supervisors who conducted site visits and meetings and prepared interim valuations and financial statements were significant to project outcomes/success. The findings showed that projects in Gatanga Constituency were keenly monitored and evaluated which led to most of them being completed within the stipulated period and budget while meeting stakeholder's expectations. Nevertheless, the study recommended that a framework and monitoring tools should be formulated to make this exercise and that more effective monitoring of projects by relevant bodies were essential and of greatest benefit because of the improved insight they provided concerning project completion status.

Sialala (2016) examined the influence of monitoring and evaluation integration on completion of feeder road projects in the case of Kajiado County in Kenya. The study adopted a descriptive research design. The study found that timeliness, allocation of sufficient budget for M&E process and quality of M&E integration positively affected the completion of projects under study. The study found that timeliness of M&E integration revealed mistakes and offered paths for learning and improvements and allowed it to learn from each other's experiences, building on expertise and knowledge. The research revealed that project budget needed to provide a clear and adequate provision for monitoring and evaluation activities. The study showed that monitoring gave information on where a policy, program, or project was at any given time (and over time) relative to respective targets and outcomes.

Gichaiya (2016) explored the effects of monitoring and evaluation tools on implementation of wireless network projects in institutions of higher learning in Kenya using a case study of JKUAT halls of residence. A descriptive study design was used. The study found that monitoring and evaluation had a significant effect on project implementation. It was found that continuous monitoring and evaluation over the project lifecycle significantly contributed to a project working within the scheduled time frame. The study also found that, audit follow ups during monitoring and evaluation significantly contributed to meeting set quality standards during project implementation. That monitoring and evaluation of project could significantly contribute to sustainability and which was a key indicator of successful project implementation. The study recommended that the management of institutions should institutionalize recommendations from follow up audits and feedbacks from stakeholders in order to reduce the gap between actual project implementation and the expected implementation which would otherwise bring shortcomings to the achievement of the intended project goal.

Biwott, Egesah, and Ngeyo (2017) evaluated the role of monitoring and evaluation on the sustainability of Kenya Government Constituency Development Fund (CDF) projects in Kenya based on a desktop study. The study found that monitoring provided continuous feedback on the project implementation as it identified potential successes and constraints that could guide in timely decisions. Evaluation on the other hand was found to assist in determining the degree of achievement of the objectives; determining and identifying the

problems associated with programme planning and implementation; generating data that allowed for cumulative learning which, in turn, contributed to better designed programmes, improved management and a better assessment of their impact; assisted in the reformulation of objectives, policies, and strategies in projects/programmes. The study found that evaluation was therefore a process that determined the viability of programmes / projects and facilitated decisions on further resource commitment. The study recommended further training be given to many CDF project managers in aspects of monitoring and evaluation so as to encourage them to use these tools often and correctly to inculcate sustainability of the intention of the projects implemented.

Umugwaneza (2016) assessed the role of monitoring and evaluation on project sustainability in Rwanda using the case study of Electricity Access Scale-Up and Sector-Wide Approach Development Project (EASSDP). The study used a descriptive research design. The findings of this study revealed that there was a significant positive relationship between accountability, effective communication, partnership for planning and supportive supervision on sustainability of projects” in Rwanda. The study found that setting expectations, tracking progress and integrating the project with performance management processes ensured accountability in undertaking the project which led to increased productivity. The study also found that effective communication enhanced employee morale, facilitated team building, led to reduced conflicts as well as stronger relationship within the project. It was also established that partnership for planned led to creative brainstorming while supportive supervision ensured there was a review and discussion project issues, ensured that project managers received feedback and reflected on the content and ensured that the Process of the work was undertaken from more than one perspective.

## **RESEARCH METHODOLOGY**

### **Research Design**

The study made use of a descriptive survey research design. The focus of this design is to provide accurate and valid representation of the factors or variables that pertain or are relevant to the research question. According to Burns and Grove (2003:201), descriptive research design “is designed to provide a picture of a situation as it naturally happens.” The major aim of choosing this design was because it assisted the researcher in answering the questions concerning the existing/current status of the phenomena under the study through the data collected and it also helped in finding out the causal relationship present between study variables (Mugenda & Mugenda, 2008). This design therefore enabled the researcher to determine the how critical success factors namely contractors’ competencies/capacity, resource mobilization, target beneficiary participation, local politics and governance as well as monitoring and evaluation had influenced the implementation of road projects in Wajir County. The design further assisted the researcher in giving a true picture of the situation on the ground as it pertained to key factors in the implementation of road projects in Wajir County as well as the actual implementation of these projects.

## **Target Population**

Borg, Gall, and Gall (2007) underline that it is crucial for the target population of a study to possess features which the researcher can effortlessly observe and utilize in extrapolating the outcomes of the inquiry. The study targeted 5 county officials under the transport and infrastructure department, 150 project management committee members drawn from the various road projects in the county, 80 registered road contractors involved in the various road projects in the county as well as 225 local community leaders representing the local residents who were the target beneficiaries of road projects drawn from various project and development committees in the county. By ensuring that various stakeholders in the road projects in the county participated in the study, the researcher was able to get objective information that gave a true picture on the situation in the ground pertaining to implementation of road projects.

## **Sample Size and Sampling Procedures**

Selecting a study sample is a crucial phase in the research process given that studying an entire population can hardly be practically, efficiently or ethically undertaken. Given the small number of county officials in the transport and infrastructure department which was manageable, a census of these officials was taken. Therefore, all the 5 county officials serving in the Transport and Infrastructure Department were involved in this study. Since it was not possible to involve all the road project management committee members in the study due to time and financial constraints, the researcher selected 20% of the PMC members. This was done in line with Mugenda and Mugenda (2003) and Kothari (2004) who asserted that a sample size of 10% to 30% of the total population was adequate for a study. In this study, 30 road PMC members participated in the study. The study then applied simple random sampling method in generating the sample. Furthermore, the researcher selected 30% of the total number of registered road contractors involved in the various road projects in the county in line with Mugenda and Mugenda (2003) and Kothari (2004). Hence, 24 registered road contractors participated in this study. In this study, 30% of the local community leaders who were the representatives of the target beneficiaries of the various road projects in the county were involved in the study. Mugenda and Mugenda (2003) and Kothari (2004) assert that a sample size of 10% to 30% of the total population is adequate for a study. Therefore, 68 local community leaders were involved in the study. They were selected using simple random sampling.

## **Data Collection Instrument and Procedures**

The study used primary data collected using structured questionnaires. The questionnaire contained seven sections where Section A consisted of questions capturing the personal information of the study respondents while Sections B, C, D, E, F and G covered questions relating to contractors' competencies/capacity, resource mobilization, target beneficiary, political goodwill and governance, monitoring and evaluation and implementation of road projects in Wajir County respectively. The questions were based on a Likert 5-point Scale

(degree of agreement scale) as displayed in Appendix II. Questionnaires were used in this study because they were cheaper and non-time consuming and were also suitable for collecting data that was unbiased. The questionnaires were hand delivered to the respondents by the research assistants engaged by the researcher. Follow up reminders through phone calls were made after two weeks in the event that a respondent did not fill the questionnaire. The researcher furnished the respondents with an introductory letter issued by the university so as to win the trust and confidence of the study participants. Their consent was also sought before commencing the data collection exercise. An advice form was issued before they could consent to be part of the study. The researcher also sought the authorization of the county management since the research focus on road projects undertaken by the county government. As a requirement in fulfilment of ethical requirements, the researcher further obtained a permit for research from the National Commission for Science, Technology and Innovation (NACOSTI).

### **Data Analysis and Presentation**

The questionnaires were edited to ensure that they were completed and consistent so as to ascertain whether the participants had filled them as requested. Afterwards, the data obtained was screened and cleaned so as to establish if there were errors that need to be corrected. Data analysis methods that employed involve quantitative procedures. Coding and entry of the quantitative data into SPSS (V.20) resulting to the creation of a data sheet/template was undertaken in preparation for the analysis of the data. Descriptive statistics meant for giving a description of the basic features of the data that was gathered were generated. Pearson's Correlation, Analysis of variance (ANOVA) and Multiple Regression Analysis comprised the inferential statistics. The reason for using a multiple regression model was to enable the researcher to establish the direction and how strong the relationships the inquiry variables were by quantifying the impact of each and every predictor variable on the dependent variable. The testing of the entire research questions was undertaken at 95% confidence level (0.05 significance level). A numeric value consisting of a numeric code was assigned to each response. The model used to link the variables was as shown below;

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + e$$

Where: Implementation of Road Projects in Wajir County;  $Y = \beta_0$  = Constant;  $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$  = Regression Coefficients;  $X_1$  = Contractors' Competencies/Capacity;  $X_2$  = Resource Mobilization;  $X_3$  = Target Beneficiary Participation;  $X_4$  = Political Goodwill and Governance;  $X_5$  = Monitoring and Evaluation;  $e$  = Error term

So as to test for causal connection between the dependent and predictor variables, evaluation of the  $R^2$  statistic, F statistic, beta coefficients for significance were assessed using p values. The analyzed data was presented in frequency tables and charts as per the study objectives.

## **RESEARCH RESULTS**

### **Contractors' Competencies/Capacity and Implementation of Road Projects**

The first objective of the study was to examine the influence of contractors' competencies/capacity on implementation of road projects in Wajir County. The study found that contractors' competencies/capacity had a positive and significant influence on the implementation of road projects in the county. The findings meant that enhanced contractors' competencies/capacity would lead to increased implementation of road projects in the county. Hence, the selection and awarding of contracts to contractors with and based on the requisite technical and financial capacity and also tactic knowledge, scrutinizing their experience and track records before selection, ensuring effective coordination of contractors with other parties, ensuring that their decisions are adequate and timely as well as pushing for excellent site and resource management among the selected contractors was crucial in enhancing the implementation of road projects in the county.

### **Resource Mobilization and Implementation of Road Projects**

The second objective of the study was to establish the influence of resource mobilization on implementation of road projects in Wajir County. The study established that the implementation of road projects in the county was positively and significantly influence by the level of resource mobilization. This implied that enhanced resource mobilization would lead to increased implementation of road projects in the county. Therefore, the adequacy of funds allocated to the projects, steady availability of these funds as planned for all project activities, the prudent use and administration of the funds, minimal procedural delays in the disbursement and ensuring timely payments to contractors for work were critical in the implementation of the road projects. The commitment and continuity of financiers, the capacity of the county government to mobilize considerable local fund and diversifying its sources of road construction projects were also fundamental in the implementation of the road projects in the county.

### **Target Beneficiary Participation and Implementation of Road Projects**

The third objective of the study was to determine the influence of target beneficiary participation on implementation of road projects in Wajir County. The study discovered a positive and significant influence of target beneficiary participation on the implementation of road projects in Wajir County. The findings implied that increased target beneficiary participation would lead to increased implementation of road projects in the county. Thus, the active involvement of local residents in all phases of the road projects, their involvement in needs' appraisal through their community leaders, the participation of local residents in project initiation and making the monitoring and evaluation of the projects a collective responsibility of all stakeholders were crucial in enhancing the implementation of road projects in the county. Furthermore, involvement of community leaders in the identification of corrective actions for project issues and risks, enhanced two-way communication between



project managers and residents throughout project cycle and ensuring community representatives have access to financial reports for all road projects played a great role in the implementation of road projects in the county.

### **Political Goodwill and Governance and Implementation of Road Projects**

The fourth objective of the study was to explore the influence of political goodwill and governance on implementation of road projects in Wajir County. The study found that political goodwill and governance had a positive and significant influence on the implementation of road projects in Wajir County. Increasing the level of political goodwill and governance, therefore, would lead to enhanced implementation of the road projects in the county. Hence, ensuring accountability and integrity among project parties including politicians, ensuring little political influence on the road project decisions, transparency in the selection of project management committees, setting up effective structures for limiting politicians' influence in the project cycle, ensuring that road project decisions are made in the interest of stakeholders, obtaining consensus among political leaders on projects initiated as well as limiting political patronage in the awarding of road contracts would go a long way in enhancing the implementation of road projects in the county.

### **Monitoring and Evaluation and Implementation of Road Projects**

The final objective of the study was to find out the influence of monitoring and evaluation on implementation of road projects in Wajir County. The study found that that monitoring and evaluation had a positive and significant influence on the implementation of road projects in the county. Enhanced monitoring and evaluation would therefore lead to increased implementation of road projects in the county. Therefore, possession of an established framework and tools for project monitoring, continuous checking of the physical and financial progress of road projects against established schedules and budget plan, using appropriate evaluation reviews and reports throughout project lifecycle and periodic site visits by the county transport and infrastructure committee were fundamental in the implementation of road projects in the county. Moreover, emphasizes on monitoring the road projects at frequent intervals and timely basis and ensuring that the results and feedback from monitoring and evaluation of road projects were timely were of great importance in the implementation of road projects in the county.

## **INFERENTIAL STATISTICS**

### **Correlation Analysis**

Correlation analysis was undertaken in order to establish the association between the contractors' competencies/ capacity, resource mobilization, target beneficiary participation, political goodwill and governance and monitoring and evaluation with the implementation of road projects in Wajir County. The direction, strength and significance of the associations

between the independent variables with the dependent variable were investigated. Pearson correlation coefficients were used.

**Table 1: Correlation Matrix**

		Implementatio n of road projects	Contractors’ competencies/ capacity	Resource Mobilizati on	Target Beneficiary Participation	Political Goodwill and governance	Monitoring & Evaluation
Implementation of road projects	Pearson Correlation	1					
	Sig. (2-tailed)						
	N	107					
Contractors’ competencies/ capacity	Pearson Correlation	.766**	1				
	Sig. (2-tailed)	0.000					
	N	107	107				
Resource Mobilization	Pearson Correlation	.812**	.688**	1			
	Sig. (2-tailed)	0.000	0.000				
	N	107	107	107			
Target Beneficiary Participation	Pearson Correlation	.734**	.596**	.668**	1		
	Sig. (2-tailed)	0.000	0.000	0.000			
	N	107	107	107	107		
Political Goodwill and Governance	Pearson Correlation	.685**	.484**	.631**	.653**	1	
	Sig. (2-tailed)	0.000	0.000	0.000	0.000		
	N	107	107	107	107	107	
Monitoring Evaluation	Pearson Correlation	.742**	.617**	.640**	.650**	.629**	1
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	
	N	107	107	107	107	107	107

\*\* Correlation is significant at the 0.01 level (2-tailed).

The interpretation of the strength of coefficients as given by Sedgwick (2012) is as follows: .00 to .19 is very weak, .20 to .39 is weak, .40 to .59 is moderate, .60 to .79 is strong while .80 to 1.0 is very strong. In this study, the significance of the association between the variables was tested at 0.05 significance level. The study found that contractors’ competencies/ capacity had a strong positive and significant correlation with the implementation of road projects in Wajir County given ( $r=0.766, p=0.000, p<0.05$ ). The findings also showed that resource mobilization and the implementation of road projects in Wajir County were positively and significantly correlated and their correlation was very strong ( $r=0.812, p=0.000, p<0.05$ ). The study further established that target beneficiary participation had a strong positive and significant correlation with implementation of road projects in the county as shown by ( $r=0.734, p=0.000, p<0.05$ ). The correlation between political goodwill and governance and implementation of road projects in Wajir County was

also found to be strong, positive and significant ( $r=0.685$ ,  $p=0.000$ ,  $p<0.05$ ). Lastly, the study found a strong positive and significant correlation between monitoring and evaluation and implementation of road projects in Wajir County. The study findings implied that contractors’ competencies/ capacity, resource mobilization, target beneficiary participation, political goodwill and governance and monitoring and evaluation were positively and significantly associated with the implementation of road projects in Wajir County.

**Regression Analysis**

The influence of contractors’ competencies/ capacity, resource mobilization, target beneficiary participation, political goodwill and governance and monitoring and evaluation on the implementation of road projects in Wajir County was quantified using regression coefficients. A multiple regression analysis was conducted so as to establish the combined influence of these factors on the implementation of road projects in the county.

The results presented in Table 2 gives the model summary. The coefficient of determination ( $R^2$ ) of 0.811 implied that contractors’ competencies/ capacity, resource mobilization, target beneficiary participation, political goodwill and governance and monitoring and evaluation explained 81.1% of the changes in the implementation of road projects in Wajir County. The findings also meant that the stated factors were satisfactory variables in explaining the implementation of road projects in the county. 18.9% of the changes in the implementation of road projects in Wajir County were explained by other factors not included in the model. At times, the value of R squared can be overestimated so the adjusted R squared corrects the value so as to provide better estimate of the true population value. An adjusted R squared of 0.801 in this study implied that accurately, the total variability in the implementation of road projects in Wajir County of 80.1% was explained by contractors’ competencies/capacity, resource mobilization, target beneficiary participation, political goodwill and governance and monitoring and evaluation.

**Table 2: Model Summary**

<b>Model</b>	<b>R</b>	<b>R Square</b>	<b>Adjusted R Square</b>	<b>Std. Error of the Estimate</b>
1	.900a	0.811	0.801	0.24472

a Predictors: (Constant), Monitoring Evaluation, Contractors Capacity, Political Goodwill, Target Beneficiary Participation, Resource Mobilization

Table 3 outlines the analysis of variance results. The results indicate that the overall model used to link contractors’ competencies/capacity, resource mobilization, target beneficiary participation, political goodwill and governance and monitoring and evaluation to the implementation of road projects in Wajir County was statistically significant. This is supported by  $F= 38.851$  and associated  $p= 0.000$  which was less than 0.05. Further, the results implied that the independent variables namely contractors’ competencies/ capacity, resource mobilization, target beneficiary participation, political goodwill and governance and monitoring and evaluation were good predictors of implementation of road projects in Wajir County.

**Table 3: ANOVA Results**

<b>Model</b>		<b>Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
1	Regression	25.884	5	5.177	86.44	.000b
	Residual	6.049	101	0.06		
	Total	31.932	106			

a Dependent Variable: Implementation of Road Projects in Wajir County

b Predictors: (Constant), Monitoring Evaluation, Contractors Competencies/Capacity, Political Goodwill and Governance, Target Beneficiary Participation, Resource Mobilization

The regression coefficients results are presented in Table 4. The study findings show that contractors’ competencies/capacity had a positive and significant influence on the implementation of road projects in Wajir County given ( $\beta=0.271$ ,  $t= 4.422$ ,  $p=0.000$ ,  $p<0.05$ ). These findings implied that a unit increase in contractors’ competencies/capacity would lead to increased implementation of the road projects in the county by 0.271 units. The study findings agree with that of Opuch (2016) who found that technical capacity, selection criteria and the financial capacity of contractors affected the completion of road projects. The study findings also supported that of Mydin, Sani, Taib, and Mohd (2014) and Kimemia (2015) who found that financial problems of the contractor and their experience respectively significantly influenced the delay of construction projects in the road sector.

The study also found that resource mobilization had a positive and significant influence on the implementation of road projects in Wajir County as supported by ( $\beta=0.326$ ,  $t= 4.455$ ,  $p=0.000$ ,  $p<0.05$ ). A unit increase in resource mobilization would lead to increased implementation of road projects in the county by 0.326 units. The study supports the findings of Wambui, Ombui, and Kagiri (2015) that adequacy of funds, their availability, management of the funds, cost saving and accessibility of these funds influenced the completion of the road projects. The findings also agreed with that of Maendo, James, and Ngugi (2018) who noted that mobilization of financial resources had significant positive results on accomplishment of roads construction projects. These findings were also in agreement with that of Murithi, Makokha, and Otieno (2017) who noted that project resource allocation had a significant influence on timely completion and success of public construction projects.

The study further found that target beneficiary participation had a positive and significant influence on the implementation of road projects in Wajir County as shown by ( $\beta=0.145$ ,  $t= 2.128$ ,  $p=0.036$ ,  $p<0.05$ ). Increasing the level of target beneficiary participation by a unit would lead to increased implementation of road projects in Wajir County by 0.145 units. The study findings agreed with that Ndunda, Nyang’au, and Mbura (2017) who found that project beneficiary participation positively and significantly influenced the achievement of road projects by enhancing project acceptability which led to the projects being completed at the required time limit. The findings were also consistent with that of Mwobobia (2013) who found lack of community involvement resulted to late completion of the project, inefficient use of the resources and lack of satisfaction of client (community members) in all aspects expected and hence negative effects on project sustainability.

It was further discovered that political goodwill and governance positively and significantly influenced the implementation of road projects in the county ( $\beta=0.136$ ,  $t= 2.202$ ,  $p=0.030$ ,  $p<0.05$ ). A unit increase in the political goodwill and governance would lead to increased implementation of road projects in the county by 0.136 units. The study findings were congruent with that of Kinyanjui, Bulitia, and Machogu (2016) and Adek (2016) who found that governance standards significantly affected the implementation of projects by mitigating the selection and planning projects to favour the personal interests of powerful project stakeholders. The findings were in agreement with that of Zakayo (2017) who established that political goodwill influenced the implementation of projects and recommended the institution of strong policies that would help curb political selfishness which impeded implementation of projects under the devolved system. The findings are also consistent with that of Ogeno (2016) who found out that political interference, political hand in funds disbursed per project and management autonomy played a critical in determining the success or failure of the completion of construction projects.

The study also noted that monitoring and evaluation positively and significantly influenced the implementation of road projects in Wajir County as shown by ( $\beta=0.178$ ,  $t= 2.834$ ,  $p=0.006$ ,  $p<0.05$ ). The findings implied that increasing the level of monitoring and evaluation by a unit would result to increased implementation of road projects in the county by 0.178 units. The findings relate to that of Barasa (2014) who found that monitoring and evaluation tools had an influence on project completion. They are also consistent with that of Sialala (2016) who found that timeliness, allocation of sufficient budget for M&E process and quality of M&E integration positively affected the completion of projects by revealing mistakes and offering paths for learning and improvements.

**Table 4: Regression Coefficients**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-0.121	0.160		-0.754	0.453
	Contractors' competencies/capacity	0.271	0.061	0.282	4.422	0.000
	Resource Mobilization	0.326	0.073	0.315	4.455	0.000
	Target Beneficiary Participation	0.145	0.068	0.143	2.128	0.036
	Political Goodwill	0.136	0.062	0.140	2.202	0.030
	Monitoring Evaluation	0.178	0.063	0.186	2.834	0.006

a Dependent Variable: Implementation of road projects in Wajir County

Furthermore, the study supported the study by Gichaiya (2016) which highlighted that monitoring and evaluation had a significant effect on project implementation by significantly

contributing to a project working within the scheduled time frame and meeting of set quality standards during project implementation. The following model was fitted;

$$Y = -0.121 + 0.326X_2 + 0.271X_1 + 0.178X_5 + 0.145X_3 + 0.136X_4$$

## **CONCLUSIONS**

The main objective of the study was to assess the critical success factors in the implementation of road projects in Wajir County, Kenya. Based on the study findings, the study concluded that contractors' competencies/capacity were a critical success factor in the implementation of road projects in the county. The study concluded that the experience and technical skills of road contractors, their knowledge and integrity, their decision making capabilities as well as their financial power played a significant role in the implementation of road projects in the county.

Similarly, the study concluded that resource mobilization was also a critical success factor in the implementation of road projects in the county. The study also concluded that resource mobilization had the largest influence on the implementation of the road projects in the county. The study further concluded that adequacy and timeliness of funding, financing methods and diversity of project fund sources greatly influenced the implementation of road projects in the county.

The study further concluded that target beneficiary participation as exemplified by local residents' participation and involvement in the evaluation, selection and prioritization of the projects, following up or monitoring the projects and management of project funds was fundamental in the implementation of road projects in Wajir County.

The study also concluded that political goodwill and governance was a critical success factor in the implementation of road projects in Wajir County. The study concluded that the level of involvement of politicians/political interference in projects, the level of political goodwill/acceptance of projects, accountability, corruption, transparency in project leadership as well as the selection criteria for project management committees significantly affected the successful implementation of road projects in the county.

Last but not least, the study concluded that monitoring and evaluation was critical success factor in the implementation of road projects in Wajir. The study concluded that the control mechanisms, project reporting and reviews, project performance reviews and feedback framework, project monitoring schedules as well as monitoring and evaluation audit follow ups were fundamental in the implementation of road projects in the county.

The study also concluded that if the county was to witness improved implementation of road projects in the county, emphasis had to be placed on enhancing the level of contractors' competencies/capacity, resource mobilization, target beneficiary participation, political goodwill and governance and monitoring and evaluation throughout the project lifecycles.



## **RECOMMENDATIONS**

Based on the study findings, the study recommends that the county government should ensure that there are established structures and guidelines which are adhered to during the selection of road contractors and that measures are put in place to tame corruption and political influences in awarding of contracts. The study also recommends that the county should have an established system where the details and track records of road contractors who have worked before with the county government are kept and integrated so that tracking of their delivery can easily be undertaken to minimize recurring cases of selection of non-performing contractors.

The study also recommends that county government should devise innovative ways of raising extra local funds to supplement the total funds from the central government to ensure smoothing implementation of road projects. The study recommends that the county government should diversify the sources of funding for infrastructure projects so as to avoid runouts due to overdependence on one source of funding. The study also recommends timely planning in implementing road projects in order to minimize the procedural delays in disbursement of funds which derails the implementation of road projects in the county.

The study further recommends that there should be continuous stakeholder meetings and forums and consultative meetings with community representatives in order to ensure that residents are actively involved in all phases of the road project cycles. Education and awareness campaigns should also be carried out in order to sensitive the local residents on their role in pushing for effective and timely delivery of road projects in the county.

The study also recommends that there should be established structures and frameworks in place to ensure transparency and accountability among all parties involved in the road project implementation in the county. Selection of project committee members should be based on merit and proper vetting and political influences for personal gains should be curtailed through involvement of all stakeholders in the county.

The study further recommends that the county government should invest in new and creative means and tools for monitoring and evaluation of road project implementation in the county and that all project reviews and reports should be audited to establish their authenticity and accuracy. The study also recommends the need for follow up on the implementation of recommendations from the evaluations made on delivery of road projects and also the setting up of feedback systems to ensure timely communication of findings on the project delivery. The study also recommends that the county could contract an external professional to facilitate the monitoring and evaluation of the delivery of road projects in order to ensure objective reports and reviews are made without biasness and cases of coercion to given a contrary view on the delivery of the road projects in the county. The study also recommends regular visits and evaluation of project progress in order to ensure that key issues are identified on time and timely action taken.

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