

**AN ASSESSMENT OF THE CHALLENGES FACED BY ROAD CONTRACTORS
DURING THE IMPLEMENTATION PROCESS OF MALAWIAN GOVERNMENT-
FUNDED PROJECTS: A CASE STUDY OF KANENGO-AREA18 ROAD
CONSTRUCTION**

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Project Report

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**MASTER OF SOCIAL WORK IN PROJECT MANAGEMENT, MONITORING AND
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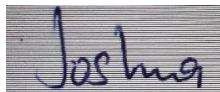


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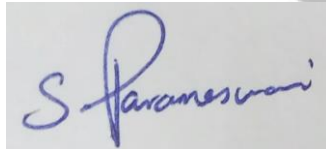
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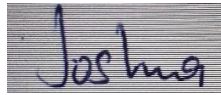
I **Shimon Joshua** do hereby declare that this project report submitted to **DMI-St. Eugene University** in the partial fulfillment of requirements for the award of the degree of **Master of Social Work in Project Management, Monitoring and Evaluation** is a record of the original work done by me under the supervision of Dr. S. Parameswari.

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At the outset, from beneath my heart, I thank the **ALMIGHTY GOD** for the blessings showered on me in all the stages of the journey of my task of completing this project work, without any obstacles.

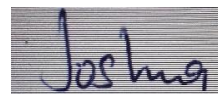
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(STUDENT NAME WITH SIGNATURE)

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ABSTRACT

The development of the construction sector is crucial to the national economy of any country or society. It comprehends growth in the both private and public sectors. The availability of infrastructural facilities describes the quality of life and also defines the standard of living of any society. The development of the infrastructural facilities largely hinges on the quality of the construction industry which can be public or private enterprises driving. Many countries across the globe have emphasized transportation networks. This includes road, railway, and air as well as water transport construction. Transportation has a huge capacity in transforming the economy of a country. Countries with poor transportation networks tend to have low Gross Domestic Product since few investors come into that country and also citizens fail to do business comfortably as a lot of money is spent on transportation. Activities of the transportation industry have a lot of significance to the success of national socio-economic growth by providing or facilitating employment to the common citizens either directly or indirectly. The industry generates income and job avenues for people and therefore the changes in the construction industry will be felt at all levels of the economy and in virtually all aspects of life. The road construction industry in Malawi faces a lot of challenges. The study aimed to assess the challenges faced by road contractors during the implementation process of Malawian government-funded projects: a case study of Kanengo-area18 road construction. The study found that contractors face several challenges including delaying payments of funds, political influence, theft, and vandalism as well as delayed removal of infrastructure by utility companies at the construction site. The research thereby recommended that government should ensure the timely provision of funds to the contractors as the delay also results in substandard works.

LIST OF FIGURES AND DIAGRAMS

1. Figure 2.1 Conceptual Framework

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LIST OF ABBREVIATION

1. SDGs Sustainable Development Goals
2. RC Road Construction
3. BNS Bingu National Stadium
4. GDP Gross Domestic product

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CHAPTER ONE

INTRODUCTION

1.1 Background

The development of the construction sector is crucial to the national economy of any country or society. It comprehends growth in the both private and public sectors. The availability of Infrastructural facilities describes the quality of life and also defined the standard of living of any society (Eriksson, 2015). The development of the infrastructural facilities largely hinges on the quality of the construction industry which can be public or private enterprises driving. Many countries across the globe have emphasized transportation networks. This includes road construction, railway construction, and air as well as water transport. Transportation has a huge capacity in transforming the economy of a country. Countries with poor transportation networks tend to have low Gross Domestic Product since few investors come into that country and also citizens fail to do business comfortably as a lot of money is spent on transportation. According to Eriksson (2015), activities of the transportation industry have a lot of significance to the success of national socioeconomic growth by providing or facilitating employment to the common citizens either directly or indirectly. Eriksson further explains that the industry generates income and job avenues for people and therefore the changes in the construction industry will be felt at all levels of the economy and in virtually all aspects of life. Capital-intensive projects such as Roads and Dams that the industry provides, and which are carried out by civil engineers, as in the different parts of the globe, are giant and key sectors in economic advancement. Regardless of the case, the construction of roads that cut across different locations is the key driver of the economy, and its significance cannot be overemphasized. Traditionally, most of these construction activities are usually funded and firmly controlled by the government or its subsidiaries (Windapo, 2017).

In African countries like Nigeria for example, the road construction sector has played a huge part in the national economy and is regarded as one of the largest of its kind in West Africa (Odediran et al., 2012). Thus, it is considered one of the leading economic factors which have significantly supported the country's national economy, regarding gross production and employment. Most contracting enterprises in the Nigerian road construction industry are mostly small and medium-sized enterprises. According to Aniekwu (2015), the larger domestic construction businesses are

relatively small enterprises, compared to most foreign firms which are large enterprises (Adams, 2017). The Nigerian construction industry is dominated by foreign contractors, and most of the construction work is carried out by multinationals in the construction industry. The road construction industry in Nigeria has witnessed an overwhelming expansion in construction as it is dominated by foreign firms that undertake a significant proportion of contracting construction works, with only a few indigenous firms (Idoro, 2019).

In some countries like Malawi, the construction of roads makes up some major components of the industry and as such requires a tremendous capital outlay, and this depicts that a huge amount of the national budget on infrastructure advancement should be channeled to road construction. Nonetheless, despite the established imperativeness, it is a disappointing fact that these construction activities are still failing to achieve their objectives as a result of the fact that, road contractors are still challenged with numerous factors that impede their undertakings during their execution. Currently, the execution of government projects is becoming more and more unsuitable due to the bureaucratic nature of the procurement of public works. Other researchers have argued that prolonged payment delays, unbudgeted financial burdens, and cash flow problems make it difficult for road contractors to execute their work properly (Foster and Shkaratan, 2014).

Irregular and delayed payments are a major challenge faced by road contractors in the execution of government projects. According to Windapo (2017), the condition of the contract spells out a specific period within which a contractor should be paid after submission of a monthly statement to the consultant for certification and onward payment. However, in many cases, the contractor is not paid within the contractual specified period and this acts as a challenge to contractors in the execution of governmental projects.

Furthermore, politics is a major problem road contractors face and this makes them get frustrated with the contracting environment in Malawi. Contractors often complain that the business environment of governmental projects is driven by politics and whom you know syndrome (World Bank Report, 2020). In case of a change in government, projects being executed are delayed, and new ones begin without any continuation of the previous ones. For road contractors to survive the current commotion in this economic atmosphere, there should be new initiatives to march the qualms. Fong and Choi (2020) state that it is a well-known fact that the Malawi government has

been losing billions of kwacha in the construction sector through poor quality work, ripping off the government through overpricing, outright theft where contractors pocket the money for work not done or revising the original contract amount for reasons that do not make sense. It is equally true that many contractors have been awarded contracts because of corruption or not following proper procedures. The construction industry in Malawi needs a very big reform. Many companies get dubious contracts and they also overcharge. For example, the road from Parliament roundabout in Lilongwe to BNS in area 49, a road of about 4.5 kilometers costs over 6 billion which is very high compared to other roads in the country (World Bank 2020). Though the road construction industry is facing so many challenges, Infrastructure contributed 1.2 percentage points to Malawi's annual per capita GDP growth over the past decade. Raising the country's infrastructure endowment to that of the region's middle-income countries could increase that contribution by 3.5 percentage points.

1.2 Problem statement

There is good evidence that some of the projects that the City Councils implement, do face a lot of challenges that make the projects not be completed and delivered according to the pledged time frame. The worst part of it is that even if the projects are completed, they do not last long, and instead in just three to five years of existence, the roads tend to be in a very dilapidated situation with heavy potholes and cuttings. A good example is Area 18 - Senti to Area 25 road which only lasted for two years (Foster and Shkaratan, 2014).

Since the country attained democracy, there has been evidence of several road construction projects which either took a long time to get completed despite adequate funding and also other roads getting dilapidated a few years or months after construction. This is an indicator that somehow things are not okay either on the government side or the contractors themselves (World Bank, 2020). The Construction Sector Transparency Initiative study undertaken in 2010, unveiled that most of the road infrastructure projects implemented whether through public or private construction companies failed to be completed on time, within budget, and with the required quality (Banda and Pretorius 2016). It is from this background therefore that the research aims at assessing challenges faced by road contractors during the project implementation process of Malawian government projects.

1.3 Main Objective

The main objective of this research was to assess challenges facing road contractors during the project implementation process of government-funded projects and their impact on performance.

1.3.1 Specific objectives

- To find the challenges faced by road contractors during the project implementation process.
- To assess the specific problems which affect the performance of the contractors in the project implementation process.
- To suggest suitable solutions to face the challenges of road contractors.

1.4. Research questions

To achieve the aims and objectives of the study, the researcher used the following research questions.

1. What are the challenges faced by road contractors during the project implementation phase?
2. How do the challenges affect the performance of the contractors in the project implementation process and the quality of the roads?
3. What could be the best ways of dealing with challenges faced by road contractors?

1.5 Significance of the Study

The study is very significant in several ways for this present situation and even future situations. Firstly, the study will assist in identifying problems facing contractors thereby finding solutions that will for sure assist stakeholders involved in road construction like the Ministry of Transport, Ministry of Finance, roads authority, local councils as well as contractors to know and understand better challenges that affect road contractors during project implementation and how the challenges affect the quality of work.

The research shall help the country to deal with problems of poor-quality work by some contractors and as well as late completion of some projects. The research will act as a bridge between the contractors and government departments or ministries involved in the sector.

The study shall also see an improvement in service delivery not only in road construction but also in other sectors since some of the challenges and solutions that will be proposed will almost be similar. This will as well help us understand the importance of the identified challenges to bring about lasting solutions to the problem. The outcome of this study, therefore, will unveil the important issues and suggested remedies to the challenges identified, and in return, the results could as well be used to improve public infrastructure policies in our various City and local assemblies. Dealing with the challenges proactively can result in saving government resources which are usually from the taxpayer's money or loans from international institutions of lending that might be involved in the maintenance of the roads in just a few years.

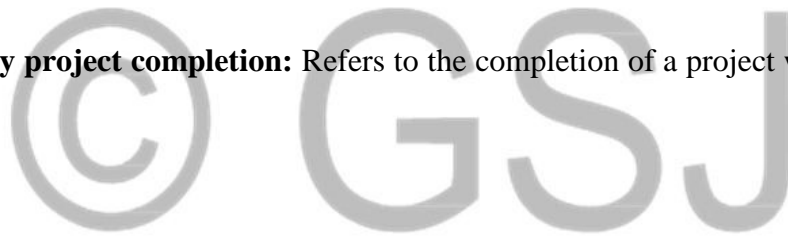
1.6 Scope of the Study

The study will be conducted in Lilongwe city with a focus on the Kanengo - Area 18 road construction project which is underway. The study will mainly look at the challenges the contractors face during the implementation of such projects. The study will heavily rely on questionnaires, observations as well as focus group interviews. The research will rely on data that will be collected from construction companies, laborers, Lilongwe City Council officials as well as from the Roads Authority. The research will be qualitative in general and the study will involve 36 respondents.

1.7 Definition of unfamiliar terms

- i. Change of scope** refers to the adjustment of the original project usually tends to increase the workload, material quantities, and cost of the project.
- ii. Infrastructure:** Refers to the fundamental facilities and systems serving a country, city, district, or other areas, including the services and facilities necessary for its economy to function.

- iii. **Local councils/local authorities:** Refers to a district council, town council, municipal council or city council constituted under the Malawi Local Government Act,1998
- iv. **Malawi local government system:** The Malawi Local Government comprises four twenty-eight district councils, two municipal councils, and one town council. “It has a single tier and all councils are on the same level with no subsidiary or supervisory structure and are referred to as districts in their entity in Malawi Local Government Act” (Commonwealth Local Government Forum, 2015: 94).
- v. **Project construction delay:** Making something happen later than expected; causing something to be performed later than planned, or not acting timely.
- vi. **Project management:** This is the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements”.
- vii. **Timely project completion:** Refers to the completion of a project within the planned time.



CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter highlights the main literature related to the study. It begins by giving an overview of international literature, national literature, research gap, and finally theoretical framework and conceptual framework.

2.1 International Reviews: Overview of infrastructural development

Challenges can be viewed as chances for success rather than problems. For projects to be completed successfully, project management bodies of knowledge and project managers' resource management capabilities must expand. Effective project management necessitates the ability to manage uncertainty and deal with a variety of challenges Andersen, E.S. (2014). A wide range of factors can pose a challenge, and these factors have a significant impact on projects and the body of project management knowledge as a whole. According to Kang (2017), societies aspire for development, it is believed that economic growth explains much of the development feature; countries spend much of their resources by facilitating and constructing public infrastructures to sustain their economic growth. Public infrastructure construction projects have a great role, especially in developing countries in driving a country's economic success provides the ability to grow and become more viable and competitive in world markets, and also, to the paybacks arise as transport improvements goings to have access to larger markets and wider Economic activities (Moriel, 2017). The availability of better services and cheap transport influence the firm's location and size, size of trade activity, and higher agricultural production, such activities improve the quality of the country's citizens' life. Many theoretical works are linking the contribution of transport infrastructure to growth and welfare. The impacts of investment in road transport can be substantial (Kang, 2017). At the macro-level economy, road connectivity is related to the national output and per capita income increment. A developed road transport network links supply with demand and affects people's living standards positively, and also it facilitates socio-economic activities.

Generally, road transport development is believed as one of the international tools for development and also it is one part of SDGs (Fong and Choi, 2020). The road construction industry in Ethiopia

suffers from many challenges and complex issues in performance. Performance is related to many topics and aspects such as time, cost, quality, client satisfaction; productivity, and safety. In the Addis Ababa Road Authority office, there are many road construction projects such as big and wide ring roads, as well as small and medium road construction projects which are constructed by local and international contractors. On those projects, there are different challenges to the execution process and their performance (Fong and Choi, 2020).

2.1.1 Construction Projects and projects performance

Kang, 2017). Explains that construction success is primarily dependent on achievement success. Many past studies on building projects have been studied. The structure of work achievement, the retroactive productivity and work quality feedback, and the impacts from up-to-date to down-to-earth phases (Fong, & Choi, 2020). The project performance areas were pinpointed: people, cost, time, quality, safety and health, environment, satisfaction with the customer, and communication. Obtained that a control system is an essential consideration in identifying factors that influence the effort of building. One or more Project Performance Indicators are needed for each of the project objectives (Fong and Choi, 2020).

2.1.2 Challenges that Affect the Performance of the construction project

A wide range of performance indicators can be assessed and evaluated using multiple measures (Groups) such as time, costs, quality, customer satisfaction, changes to clients, profound romance, and found the issues of construction contractors' performance failure (Kang, 2017). These include lack of work experience, production efficiency, and enhancement, the use of computer software, procurement practices, claims, company's internal problems, low competitive margin profit margin, cash flow management, equipment management, and usage, increased project number, increased size, changes in the project size. In their study, Fong and Choi (2020), outline the parameters affecting construction project performance in various groups from his research study. The most significant considerations are cost, time and quality, productivity, customer happiness, and organizational learning.

2.1.3 Factors affecting cost and time performance

According to (Okuwoga, 2018), cost and time execution have been distinguished as common issues within the construction industry. During the development stage, many unforeseen problems and changes from the initial plan emerge, coming about in cost and time performance issues. Poor management of the site and unexpected land conditions are identified as three main factors creating delays and problems with the schedule and cost performance in local building projects, and very slow coordination and integration among stakeholders of all project teams. Competency of the project manager; top management support; coordination and leadership skills of the project manager; participant monitoring and feedback; decision-making; coordination among involved parties; owners' competence Cost performance is influenced by a variety of elements including social, economic, and climatic situations (Chan, 2019).

All of the factors influencing project cost performance were evaluated as essential, but coordination among project participants was rated as the most critical. Fong and Choi (2020), investigated project time-cost performance linkages in construction projects using project scope parameters. Speed management is a key issue for the competitiveness of creative companies in engineering, procurement, and construction projects. Customers may regard time as a limited resource, in which case they will pressure the contractor to improve his or her time management. Werner, (2021), used data from eight countries to identify the factors that cause schedule and expense overruns. Some of the cost-related challenges are: Poor Finance management, Inflation, Scarcity of finance, poor project management system, high cost of ROW compensation, and delay of compensation (for ROW), and others are mentioned. The challenges of schedule-related factors are inadequate early planning of the project, poor project management assistance, very loose coordination and integration among stakeholders, Design change / Variation order, Transportation and logistical problems, and environmental factors are mentioned as the main challenges of construction projects' performance.

2.1.4 Road construction projects and associated challenges

Road construction projects fall under the category of infrastructure construction. According to Werner, (2013), road construction projects are time-bounded, meaning they are transitory and one-of-a-kind. Roads enable human, vehicle, and animal tariff activities for a variety of objectives, including commercial, tourist, and government functions. One of the most important

concerns in road construction projects or under construction roadways, particularly in urban areas, is traffic flow management. According to the el (2015), road development in metropolitan regions is more complicated than in rural ones, and this trend is projected to continue. Due to unplanned urbanization, especially in developing nations, the difficulty is more connected to land ownership concerns (right of way) and the increase in urban population, and these are the key challenges of road construction complexity in urban regions. Other existing roads, electric poles and water pipelines are all entangled in urban road construction projects, as are other facilities. One of the issues is shifting those infrastructures.

In project management, there are fundamental approaches to planning, organizing, and administering the project to control in one center with accountability. In addition, David, (2016), described project management as the application of knowledge, skill, tools, and various strategies to meet project needs. According to Lloyd (2016), the low performance of road construction projects is caused by a lack of project management approaches to stakeholders. Lloyd, (2016), also argues that project management has sufficient strategies to achieve the project results planned. That being said, construction projects are relatively difficult to operate as intended and the goal of complexity, uniqueness, mass workforce, working conditions, various subcontractors, and construction sector suppliers is difficult to achieve. Werner (2019), states that the performance of construction projects is determined by the stakeholders who are involved in the project. Project managers' abilities to delegate power, tradeoff, coordinate, perceive role and responsibility, competence, and commitment are the most important factors. The project team members' technical talents, communication skills, troubleshooting skills, and commitments are all elements to consider. The scope of the project, the uniqueness of the project's activities, and the urgency of the project are the primary variables or obstacles of the project. Higher management support, project organizational structure, functional manager support, and project championing are all aspects of the organization or company. Meanwhile, external elements such as the political situation, the economic environment, the social environment, the technological environment, nature, the client, competitors, and subcontractors all have an impact on the success or failure of building projects (Lloyd, 2019).

Many studies were made related to contractors' performance and their capacity effects on the performance of construction projects. According to Werner (2019), many challenges

that came from the contractor's side some of them are poor coordination, communication problems, project planning, and scheduling difficulties, and the problems of financing the construction projects are the main challenges that come from contractors identified in his study. Werner (2019), also explains that factors affecting a contractor's ability in government construction projects as a contractor face financial difficulties, shortage of labor, and any design change orders are the main challenges of contractors.

David (2020), identified in his study paper mainly on affecting the performance of contractors are two. The identified factors are financial problems and low capacities of managerial skills or knowledge of contractors. He stated that contractors who have problems with financial stability are difficult or deprived of access to credit and it affects their performance for a long period of years. And when they are in a low capacity of managerial skill influence contractor's performance.

2.1.5 Performance of Contractors and Consultants

According to Ruf (2015), construction contracts bind partners to mutual contractual and legal obligations that are difficult to change based on fiscal exchange. The project owner purchased a construction company's service to undertake a project contract as scheduled. Customers and contractors may have conflicts of interest in the perspective of their competing interests: clients want to have more value from their projects, but contractors are trying to maximize revenues to ensure that they are sustainable for a longer period. Lloyd (2016), explains that many tasks and milestones on construction projects are approved by the consultant from the beginning of a project; without approval, the contractor cannot proceed to the next construction level. The primary challenges that affect the performance of construction projects from the side consultants are late approval or decision-making of tests and drawings. The Owner or client-related factors and challenges in urban road construction play a significant effect on Road construction project performance. According to Werner (2019), issues of concern that affect urban road construction include the lack of a plan preceding the construction project, a lack of awareness and clarity about the project scope and stakeholders, financial issues, a lack of experience and skill, a lack of alternative roads, and late decision making on the clients' or owners' part.

2.1.6 The conflict between a public utility and public infrastructures

According to Ruf (2015), the implementation of planned road construction in urban locations has more problems than rural road construction projects. The external environment of urban road construction is different from the rural environment; external factors like dense population, social, political, lobbyist, utility, and the need for speed increase the challenges in urban road construction. Ruf (2015), further explains that some of the factors that influence the performance of road construction projects are Addis Ababa's basic government service suppliers or utility services companies, such as water and sewerage service, electric service, and Ethio-telecom. With the collaboration of the Addis Ababa City road authority, the road construction area will be ready or available on time. And the communication between utility service providers and the Addis Ababa City Road authority is not as good as the sector requires; information exchange is poor, and there are times when information is missed. As a result of poor cooperation on relocating utility infrastructures and insufficient information, Addis Ababa's utility service is inconsistent, and it affects the performance of road construction projects in Addis Ababa city (David, (2020).

2.1.7 Individual property rights, compensation, and high traffic problems

Cities in developing countries are not adequately planned or constructed according to a master plan. Addis Ababa is also another Ethiopian metropolis that is still in the process of development. Addis Ababa's settlement, like that of other developing countries, is not like the city's master plan in that there are numerous challenges in the process of infrastructure development related to individual legal property rights and needs of compensation for their property (Werner, 2019).

David (2020), explains that in Florida, the United States, the costs of compensation for the right-of-way acquisition is above the cost of the new road construction. Many contractors in developing countries and others do not take care of them at the beginning of the projects compensating for individual properties, but the major problem is the right-of-way or legal right to private or public property. Cities in developing countries must adopt policies and strategies to address legal property rights to solve problems and maintain things running smoothly.

Land acquisition is one of the key challenges in road construction projects in Addis Ababa. And the legal process of compensating for the acquisition of land and other property takes a long time and costs a lot of money. According to David (2020), this complicated process harms the performance of road construction projects administered by the Addis Ababa City Road Authority (AACRA).

When the amount of pedestrian and vehicle activity exceeds the capacity of the road infrastructure, it is referred to as high-traffic activity and crowding. A large city's significant traffic activity or congestion is expected due to its large population and diverse economic activities David, (2020). During road construction projects managing traffic activity is challenging and one of the main problems; meanwhile it can be the cause of traffic jams, it reduces the activities of humans and vehicles and it can be the cause of traffic accidents. From the side of the road construction project, jamming has a significant negative effect on construction due to the slow movement of contraction material and labor if there is no other alternative road in which traffic can divert . To solve the problems related to traffic activities which can affect the road construction projects and other traffic activities making alternative road-ready is important before the beginning of the project and using alternative roads are important to sustain the previous traffic activities and to make free area for the road construction project (Chan, 2021).

2.1.8 Consultants associated challenges for road construction projects

According to Ruf (2015), insufficient data collection and survey before design work, poor coordination, and communication, and inadequate experience in consulting are problems that came from the consultant's side. In addition to that (Kang, 2017), most design changes are the effect of inadequate attention of consultants in Road construction projects. Demands for changes come from customers and contractors after the road construction project is started; this type of design error is one of the major challenges for construction project performance on construction projects. Late decisions on the road construction projects in the city of Addis Ababa and or late approval of design documents constitute challenges making incomplete documents, late supervision and late approval of documents and millstone tasks are a consultant's responsibility and a factor of low construction project performance. When concluding the authors finding of challenges from the side of consultants in general design problems or errors, punctuality and incomplete understanding

of consultants with clients and contractors are the major challenges that affect road construction project performance (World Bank (2017). Vullings (2019), explains identification in his study is change order by the client, delay of decision-making to approve, a conflict between the co-owners of the project, late approval of sample materials, lack of attention for the projects, and making late progress payments are major challenges as client-related factors on the performance of road construction projects. In addition to those challenges or factors change of design, inappropriate assessment of process bid for selecting contractors, and not having good coordination between consultants and contractors related factors are also considered as client factors. Kang (2020), in his study, mentioned some factors of road construction projects which are related to the client's side are the delay of clearing tin project site from the claim of property right, the financial problem of client or owners, lack of coordination with other public utility or infrastructure providers, contract change or recodification are considered as client's responsibility (Chan, 2021).

2.1.9 Environmental-related Challenges of road construction projects

According to Kumar (2016), the road construction project is complex work that needs exhaustive arranging and controlled administration throughout the project time. Its advance can be influenced by parcels of reasons that come about the venture to slack behind its planned time. Rainy periods are one of the challenges in the construction sector in general, especially for road construction projects. In the rainy season, the construction area is not appropriate and difficult for laborers, machinery, and also for construction logistics. In Addis Ababa, there is also a rainy season of three months because of the destruction of most of the roads and because of a different perspectives, such as delaying times and excessive rental of machines and professional costs, which hurts road construction projects. Many construction companies claim additional time and budget in connection with these factors (Carrasco (2019).

2.1.10. The contractor's financial management

The financial strength of a firm plays an important role in the success of a project. Valentin and Vorster (2016), state that financially sounds construction firms can take higher risks with prospects of higher returns and enjoy higher credibility and reputation among clients and suppliers. In a study of 13,219 construction projects that were executed between 2004 and 2009 in southern Africa. Cash flow management is a critical element. Although timely and accurate financial information

is vital for construction firms, various business owners underestimate how much money will be needed, not only to start a business but also to sustain it as it struggles to gain financial strength. Generally, the smaller the tangible working capital as a percentage of annual turnover, the higher the probability of failure, especially if there is no credit facility from banks (Lloyd, 2016). Another contributing factor to the cash flow problems is how a contractor finances its long-term assets as this can severely impair the ability of a firm to continue with its operations. Lloyd (2016), in studying projects delayed in East Africa, focused on major road projects that link Kenya, Tanzania, Uganda, and by extension Burundi in 2011. He found out that the governments of Kenya and Uganda were affected up to the tune of 45% of road construction projects. Among the cited hindrances include poor financial management, corruption, and limited financial resources due to the diversion of project finances. The overall lack of finance to complete a project, or delays in the payment of the services by the project owners or clients can lead to a significant problem (Carrasco B. (2019).

In Gabon, there are many cases of construction projects that have failed to meet timely completion. It has been contended that the diverse and multifaceted nature of construction projects makes it “difficult to plan for, forecast, manage and control (Mrożewski, 2020).

Given the fact that a construction project is an investment that should ultimately make economic sense, construction professionals must offer tangible solutions that overcome construction delays. Projects are strategic activities “initiated to create economic value and competitive advantage” It, therefore, follows that sustainability is vital for the financing of projects (Mrożewski, 2020).

2.2 Malawi’s current situation and major challenges in road infrastructure

Olatunji, (2010), explains that Malawi has a very limited transport system and it is one of the lowest in the Southern African Development Community (SADC) region. As a result of all these problems, the country faces high transport costs (average cost in the region of US\$7 per ton per km and Malawi with a cost of US\$7 to US\$10) rendering economic and social development difficult. However, there is an attempt to invest in aviation; the rejuvenation of the rail subsector is also a target of the Government of Malawi as well as the continued expansion of the roads subsector. Many experts from development partners have had to return to their country of origin

and the import of crucial materials especially for construction has proved to be more challenging as the movement of goods from country to country has slowed down (World Bank, 2020).

2.2.1 Overview of road construction in Malawi

Dosage and Rathnamali (2013), state that in Malawi, road construction has been a developmental issue that has been moving at a snail's pace since independence. The country has seen serious investment in road construction in the past decade. In the late 1990s and early 2000s, some districts in the country had no tarmac roads and a good example is Phalombe district (Kamanga, 2015). According to David (2015), the district had no tarmac road until 2018 when the ruling government by then officially opened the road which connects the district with the neighboring districts of Zomba and Mulanje. The construction of the Zomba-Phalombe – Chitakale road started in the year 2006 and due to corruption and other irregularities the construction of the road took almost a decade to complete.

Helen (2016), explains that most roads in the country have been constructed with the assistance of development partners either through aid or loan. World Bank, European Union, International Monetary Fund, and Japanese International Cooperation have been some of the main donors as far as road construction in the country is concerned. In the past years, the country has also seen the Chinese Government coming in to support some road construction projects and this has been since 2007 when Malawi officially signed a bilateral relationship with China after terminating its relationship with Taiwan. Some roads though have been constructed using money collected locally, for example, the Mponela - Ntchisi Road as well as the Lilongwe – Kasiya Santhe Road (Chitikara, 2018). The development or construction of these roads has been a relief to most of the citizens who do different economic activities like farming and other businesses. Tarmac roads ease the transportation of commodities from one destination to another and the time taken is also very little. Other districts like Neno Boma are yet to have a tarmac road connecting the district to the neighboring district of Mwanza, Blantyre, and Balaka (Munthali, 2019).

The Ministry of Transport and public works is the ministry that looks into issues to do with road construction though other departments like the Roads Authority, City Councils as well as District Councils also are involved in road planning and construction depending on the type of road.

2.2.2 Award of Contracts to Contractors

Dosage and Rathnamali, 2013), state that the way some companies acquire a contract from the Malawi government to construct roads has been questionable. Some researchers have argued that the awarding of construction has not been depending on merit due to corruption. Some companies are connected to politicians and other senior government officials and thus provide them an opportunity to get big contracts using dubious means. Most of the companies involved in road construction in the country are foreign companies and some of them include Motor Engil, StraBag, and many others (Munthali, 2019).

According to Kunaka, (2020), some companies still get contracts despite performing badly in the previous contract and this poses so many questions if the government's serious as far as infrastructure development which is among the pillars of the economy is concerned. Some companies are still offering contracts despite charging high compared to other companies. For example, Moto-Engil, an Australian company that constructed the road from Parliament roundabout into Bingu National Stadium in Lilongwe charged over 6 billion to construct a 4.5 kilometers road (Banda, 2021).

2.3 Challenges facing road contractors in Malawi

Most companies involved in infrastructure development including road construction like roads do face so many challenges that to some extent affect their performance and the quality of work.

2.3.1 Late payments

Chitikara, (2017), states that sometimes government tends to release money late for a company to start its operations. This, therefore, affects the time of completion of the project. This is one of the reasons why most road projects do not end in the time they were planned There have been reports showing that sometimes government tends to divert money intended for certain road projects and this affects payments and operations of projects. Sometimes late payments occur as a result of incompetence or corruption among government ministries or departments involved in the projects. This, therefore, affects not only the time of completion of the project but also the quality of the work (Banda, 2021).

2.3.2 In-availability of construction materials on the market

Most materials especially machines used to construct roads are not manufactured locally. This means a company has to import from other countries. In some cases, the materials tend to be very scarce depending on demand since worldwide countries have taken infrastructure development seriously. Two years ago, the spread of the covid-19 pandemic worsened the lack of materials since most companies were closed (Banda, 2021).

2.3.3 Poor quality roads

World Bank, (2017) explains that most roads constructed in the country are of poor quality. These roads tend to have potholes a few months after completion. For example, in Lilongwe city, the Area 18 - Sent Road which was constructed in 2019 developed big potholes a few months after completion and now the road seems as if it was constructed more than twenty years ago. Part of the 25-kilometer Nsanje - Marka road section which was being constructed by a Chinese Contractor, China Railway- 20 (CR-20) got damaged by water in early 2022 and this was attributed to poor workmanship. The Karonga - Songwe border road which was constructed by a Chinese company developed potholes the same year, In 2019 it was completed and punches have already been put in the potholes in the same year. All these scenarios have greatly affected the quality of the country's road infrastructure and the government spends a lot of money on maintaining them. In other countries, if the company is awarded a contract and performs badly, the company may be sued and may not be given a chance to get another contract with the government. However, this is not the case in Malawi (Banda, 2021).

2.4 Research gap identification

The demand for road construction all over the world is promptly increasing, as the numbers of inhabitants grow. Overall, construction industry expansion will be greater in the next 30 years. As projects become increasingly more complex due to increased size, number, and supply chain participants, project managers have faced difficulty in delivering services on time, on budget, and with great customer satisfaction (Alfredo et al. 2017). The construction industry also affects the rate of GDP and employment in several countries, as a result of this, the construction industry is considered to be vital for the economic progress of a country (Olawale, 2017). Most studies have been focusing on the importance of road infrastructure economic development. Research by World

Bank (2020), discovered that most developing countries fail to maintain road infrastructure in good time and this affects the transport sector. Many studies have not tackled the challenges contractors face during project implementation. This study, therefore, aims at discovering and filling this gap by finding out why roads constructed in Malawi are not completed in time with extra unplanned costs and poor-quality roads get damaged within years after being handed over to the Malawi government. This creates unsatisfactory among stakeholders in the road industry, particularly road users. It also drains finances in the maintenance of damaged roads, putting pressure on the country's economy.

2.5 Conceptual framework

The conceptual framework illustrates the interaction of study variables; mainly the independent and dependent variables as shown in **Figure 2. 1** below. The two sets of variables were in line with the study objectives. In this research, the intention is to find out how time, cost, and quality factors which were independent variables, influence the implementation of the road projects which was the dependent variable

2.5.1 Factors affecting time (duration) in road construction project

A project schedule is a tool that communicates what work needs to be performed, which resources of an organization will perform the work, and the timeframes in which that work needs to be performed. The project schedule should reflect all of the work associated with delivering the project on time. (Henry et al. 2007). Various factors have been identified by different researchers from the time aspect in different construction industries. Lack of materials, incomplete drawings, incompetent supervisors, lack of tools and equipment, absenteeism, poor communication, poor site layout, inspection delay, and rework were found to be the most significant problems affecting project duration. Gaba, (2013) identified the five most significant factors affecting time management in the West African construction industry. They are lack of materials, rework, equipment, supervision delays, absenteeism, and interface. Lack of material, weather, and physical site conditions, lack of proper tools and equipment, design, drawing and change orders inspection delay, absenteeism, safety, improper plan of work, repetitive work, changing crew size, and labor turnover were found to be the most critical factors in Iran (Olomolaiye et al., 2018),

2.5.2 Factors affecting cost in road construction project

Project cost is the total project cost which includes design fees, material costs, construction costs, permit fees, land, furnishings, financing, and all other costs that are incurred in completing a project. The ability to accurately predict the client's financial commitment to a project, which also forms the basis of the contractor's eventual revenue, has many advantageous implications. As a pre-warning indicator, alternative courses of action can be examined and provision can be made for the preferred option. The client according to (Ibironke, 2013) has the capital and related interests to consider often with no prospect of a financial return until the full completion of the project. The factors identified by contractors affecting cost and time in a survey carried out by (Mansfield et al. 2014) include the following: price fluctuation, inaccurate estimates, delay (time overrun), additional work, fraudulent practice, and kickbacks, shortening of the contract period, construction method, poor contract management, subcontractors and nominated suppliers, a mistake during construction and non-adherence to contract condition.

2.5.3 Factors affecting quality in road construction projects

Quality is the summation of the following characteristics, right first time, value for money, customer satisfaction, and consistent conformance to specification (Ameh et al. 2012). Excellence, conformance to standards or specifications, and fitness for purpose have all been criticized as definitions of quality. Customers typically define quality as value or fitness for use, which involves expectations the customer has for the product (Garvin, 2013). Construction production quality is the degree to which the production meets the requirements and methodology stated in the design and specifications. The requirements refer to the needs or expectations of the client/promoters and the methodology implies the execution of construction in conformity with the approved design, drawings, and specifications (Chitkara, 2014). The first step in quality as defined by (Bamisile, 2014) is the definition of the customer's needs and expectations which must be translated into clearly defined and measurable requirements for building construction projects. He drew attention to the fact that good design embraces such things as getting a proper brief, ensuring the design matches the client's requirement, prescribing the best material for the job, and making sure that what is inked in the drawing can be built on the site. He also argued that only the contractor has the responsibility and power to achieve the specified standard. Experience suggests that the

contractor's inspection and control arrangement are rarely sufficient for any contract. Casual inspection methods are not likely to be effective and could leave a large section of defective work until when it becomes unreasonable to remove them. Various steps that should be followed to achieve specified quality standard at the first attempt is often not adhered to by the project team. Such steps are construction methodology, construction programs, site layout, and plant and equipment analysis (Dotchin, & Oakland, 2017).

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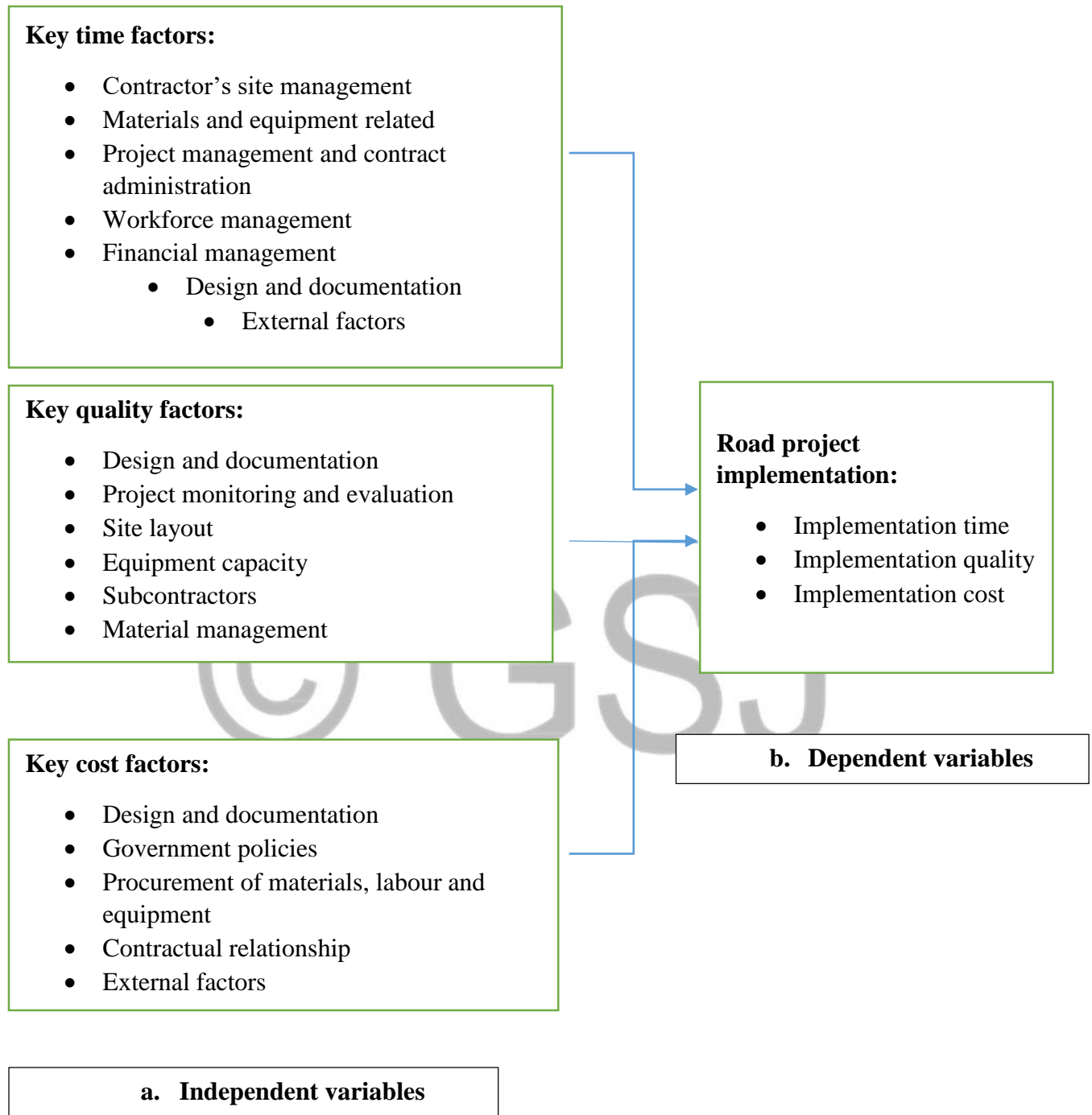


Figure 2.1 Conceptual Framework (Source: (Dekasa, 2022) and (Niguissie, 2018))

2.6 Theoretical Framework

The theory of project implementation was a mastery of Fugate and Knapp in mid-1996. Fugate and Mary, 1998 asserted that overreliance on the theoretical aspects is the single most important factor distinguishing a profession from a craft. Thus, an explicit theory is the crucial and single most important issue for the future of the road project management profession. Nutt (2006) referred to implementation as a series of steps taken by responsible organizational agents to plan the change process to elicit compliance needed to install changes. Project managers employ project implementation theory to make planned changes in organizations by creating environments in which changes can survive and be rooted. The road project manager has to devote more time and energy to human, financial, and technical variables as the key to the realization of project implementation and completion. It is further argued that it is apparent that several determinants are capable of affecting road project implementation if not handled with care. Thus, the framework in road project implementation has to translate the following theories into practice; timely disbursement of funds, engagement and involvement of relevant stakeholders and citizens, use of competent project managers and staff, and, escalation of project cost due to inflation among others. The study applied this theoretical approach because it encompasses and adequately incorporates all relevant stakeholders in road project construction to achieve deliverables (duration of the project, cost of implementing sub-projects, and quality of the overall project).

2.7 Conclusion

In as much as numerous books, documents, and articles that have been written about the Challenges faced during the process of project implementation, they do not talk about Corruption in-depth as a major conduit towards the same. The dimensions of rampant Corruption have been a big yawning gap in the effort of reducing the effects of the same. As a result, the vice continues denting the lost glory of the construction industry in Malawi. The consultants, professionals, and implementers themselves have ignored the fundamental aspect of the commission to provide the best and most sustainable projects for the citizens who happen to be taxpayers. The same is just mentioned in passing.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter presents the methodology that was used during the whole research process. The chapter presents the research design, the population of the study, the sampling technique, the sampling area, methods of data collection as well as data analysis.

3.1 Research design

Adam and Kamuzora (2018), stated that research design is a specific plan for studying the research problem. Before any research study can be conducted, an appropriate research design must be crafted and the research constitutes the blueprint for the collection, measurement, and analysis of data, and structure of investigation to obtain answers to the research questions. Therefore, the study used a descriptive research design. Descriptive research design is a type of design that enables the researcher to identify and describe characteristics of the study population, and their relationships (Saunders, Lewis, and Thornhill, 2019). Kerlinger (2015), states that the descriptive research design does not offer the research scientist authority over the information gathered as far as control of the factors of the examination. Descriptive research design in the study, therefore, was used to understand, describe and explain the challenges facing road contractors in the project implementation process of Kanengo to Area 18 road in Lilongwe, Malawi.

3.2 Population of Study

According to Chan and Ngai (2017), a population represents every possible item that contains a data value of random variables in the study. A population is defined as elements from which we wish to make some inferences and a target population is those people, events, records, or elements that contain the desired information and can answer the measurement questions and determine whether a sample or census is desired. Therefore, the population of the study consisted of top officials from construction companies and their laborers.

3.3 Sampling procedure

Sampling is the process of selecting elements from a population to represent that population (Kerlinger, 2015). In this study, the researcher used purposive sampling and random sampling. Purposive sampling is a form of non-probability sampling in which researchers rely on their judgment when choosing members of the population to participate in their study. Purposive sampling was used in selecting some respondents for the study because some particular departments or officers had much more relevant data than this study sought to find (Mohamed 2017). Therefore, purposive sampling was used or applied to select respondents from different departments like the senior staff of construction companies. On the other hand, random sampling was also used to select ground laborers from the construction company. In random sampling, each individual is chosen randomly and entirely by chance, such that each individual has the same probability of being chosen at any stage during the sampling process and random method is an unbiased surveying technique as each individual has the same probability (Mohamed 2017).

3.4 Sample size

Kothari (2004) tried to define a sample as a set of respondents selected from a large population. It is noted that the gathering of data cannot be possible from every member of the population. For this reason, a researcher must gather data from the selected members of the group. Therefore, the sample size of the study was 32 respondents in total which will include 10 officials from the construction companies and it also involved 22 laborers from the construction company.

3.5 Sampling area

According to Kothari (2004), the researcher needs to choose a research area or sampling area that will surely assist in gathering more reliable information that will give a true picture of real situations. To achieve the study's objective which is to assess the challenges faced by road contractors during the implementation process of Malawian government-funded projects, the study was conducted at the construction site of the Kanengo –area 18 road as well as the camping site of the construction company.

3.6 Sources of data collection

Data collection is the process of gathering and measuring information on targeted variables in an established system, which then enables one to answer relevant questions and evaluate outcomes. Data collection is a research component in all study fields, including physical and social sciences, humanities, and business (Kamuzora, 2018). While methods vary by discipline, the emphasis on ensuring accurate and honest collection remains the same. The sources of data for this study were primary and secondary data sources. Data gathered through perception or questionnaire review in a characteristic setting are illustrations of data obtained in an uncontrolled situation. Secondary data is the data acquired from optional sources like magazines, books, documents, journals, reports, the web, and more. The chart below describes the flow of the sources of data collection. The sources of data for this study were therefore both primary and secondary. **Figure 3.1** below describes, in summary, the flow of the sources of data collection.

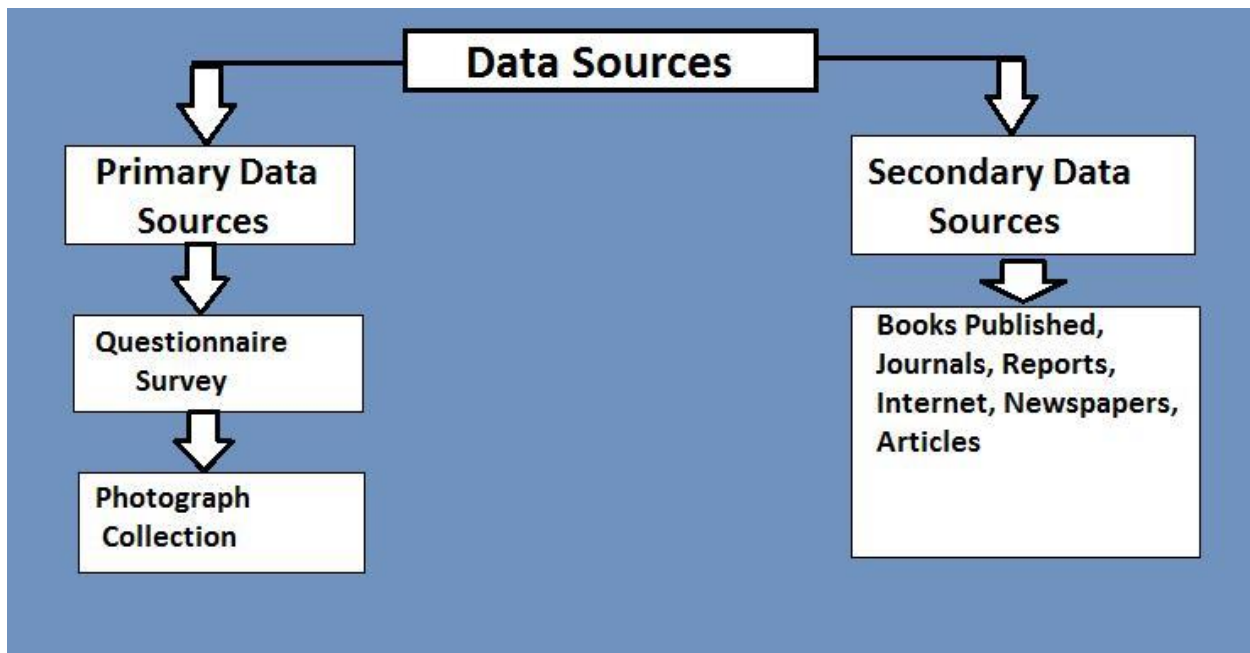


Figure 3.1 Data collection flow (Source: Kamuzora, (2018), pp 88

3.7 Data collection methods

Interviews were used to collect data on the topic and an assessment of challenges faced by road contractors during the implementation process of Malawian government-funded projects.

Questionnaires were also used to collect data from the participants. Focus group discussions were also used to interview the laborers involved in the road construction.

3.8 Tools for data analysis

The obtained data were analyzed qualitatively. Data was collected by qualitative methods and the verbal discussion in the study was analyzed in detail by content analysis and narrative analysis. These methods were used because it helps to reduce the time and effort in the process of drawing the charts based on the data in addition to that, the data collected was recorded carefully and checked for correctness before it was analyzed.

3.9 Study limitations

Each year's project presents some limitations or challenges that affect the whole process of collecting data and coming up with credible results. It is anticipated that the research will face the following limitations;

- a. Some officials especially contractors were not willing to provide full information because they were suspicious of the researcher. The researcher, therefore, confirmed to them by showing a recommendation letter from the school that the research is purely for academic purposes and nothing else.
- b. Government officials were not willing to give out information due to limited time since they were engaged with other duties. The researcher, therefore, allowed them to answer the questionnaires on their own time and the researcher collected them on another agreed day.

CHAPTER 4

RESEARCH FINDINGS

4.0. Introduction

The analysis of data of the findings was done as per the objectives of the study. The overarching aim of the study was to assess challenges faced by road contractors during the implementation process of Malawian government-funded projects: a case study of Kanengo - area 18 road construction

4.1. Challenges faced by road contractors

4.1.1. Delayed disbursement of funds from the government

The research revealed that most of the time the government does not provide the funding in time for the project. During the study, it was reported that the government does not release the money for the construction of roads in good time. This is so because of some protocols that are followed and sometimes it is because of corruption. Though the funds are not released on time, the duration of the project does not change thereby affecting the effectiveness of the whole project. This affects the contractors who work at a very fast speed to meet the targeted time while compromising the quality of the work. In this case, the contractor has no option but to wait for the funding to be released because using money from other sources can be a very big risk as the government may decide to take another contractor depending on circumstances.

Late payment also results in poor quality works because prices of construction materials keep on changing on the market and as a result, contractors tend to buy cheap or inadequate materials in case the price has changed as it takes longer for them to receive funding (Kamanga, 2015). This results in substandard work which generally affects progress as far as development is concerned.

4.1.2. Delayed removal of public utility infrastructure from the construction sites

In some instances, public utility service providers either ESCOM or Water board, and also the network providers tend to have their facilities in areas where the road will pass through. In this way, they are supposed to come and remove their infrastructure to another point or location. Most of the time it takes longer for the utility providers to do this and this makes the road contractors stop their work waiting for them to do their work. This delays the completion of the construction works. One of the respondents reported that sometimes Escom may take up to one month before

they remove their electricity poles from the construction site and this happens despite communicating with them several times. This also affects the time it takes to finalize construction works. According to Kunaka (2020), utility service providers are supposed to join hands with those in the construction field to ensure the smooth implantation of projects.

4.1.3. Political interference

The research discovered political interference as one of the big challenges faced during road construction projects. Politicians always want to influence the decisions made by road contractors. For example, after the award of the contract, the contractor is sometimes forced to hire certain companies which are connected to the politicians as sub-contractors. For fear of losing the contract, the contractor has no choice but to follow the instructions. Some of these sub-contractors are not experts as such they deliver poor-quality materials to the main contractor. As a result, quality is compromised. Munthali (2019), argues that in most African countries, politicians always interfere in the development implementation and sometimes. Recent studies from countries like Zambia, Zimbabwe and Lesotho just to mention a few indicate that political interference is one of the biggest challenges contractors face during, as well as before the actual implementation of the projects. As some time politicians even influence which engineers to employ during construction. This is the reason why we have poorly constructed roads. Some roads only take two or three years or less to develop potholes as in the case of Area 18-sent road.

4.1.4. Theft and vandalism

Theft and vandalism were also found to be among the challenges contractor face during road contraction projects in Malawi. This theft and vandalism are mostly done by people around the construction site and even workers themselves. The research found that materials like construction wires, safety equipment, fuel as well as spare part for construction vehicles went missing. The research discovered that since the onset of the project, only 25% of the total materials stolen have been recovered and some suspects have been jailed. According to Windapo (2017), theft and vandalism are also common in road construction in Nigeria which is also perpetrated by the political instability of the country. Windapo (2017), also argues that poverty is also another cause of theft and vandalism in most communities where road contraction is underway. Theft and vandalism affect road construction in the way that it results in high construction costs since the materials stolen have to be bought again to replace the stolen ones.

4.2. Effects of the Challenges on Workers

4.2.1. Late payment of salaries/ allowance and other bills

Most of the time when it takes too long for the government to release the funds for the project especially when it has more than one phase, the salaries for workers are delayed. The research discovered that sometimes the workers do not understand the reason for the late payments and they resort to strikes to force management to pay them. In some instances, contractors are forced to use money from other sources to pay them to maintain their integrity. Late payments of salaries also demotivate workers and as a result, they do not work dedicatedly and this also has an impact on the quality of the work being done. Lack of motivation has a very serious negative effect on workers and the quality of work done.

4.2.2. Injuries

The study also revealed that the workers are sometimes injured by thieves who come to the construction sites to steal different construction materials. The study found out that since the beginning of the construction, two people working at the construction camping site were seriously injured by thieves who came to the construction camp to steal some materials.

4.3. Solutions to the challenges faced by the contractors

4.3.1. Timely disbursement of funds to the contractor

The government should develop a mechanism to ensure that the funds are disbursed in good time to the contractor. This will for sure solve many problems that are encountered during the procurement of construction materials. This will in the end ensure that the work completed is of a good standard, workers' salaries are paid on time and also other bills like compensations are paid on time to those affected.

4.3.2. No political interference in the award of contracts

The research found that political interference is one of the main challenges faced during construction work. Therefore, politics must be put aside when it comes to serious development projects like these. This will also ensure that contractors work freely without being influenced to make decisions that go against their policies and lead to poor infrastructure.

4.3.2. Developing good relationships with communities around the construction site

Construction Companies must always develop a good working relationship with the communities around them. They are not supposed to view each other as a threat or an enemy. This makes the people feel ownership of the road being constructed and therefore they can report any kind of theft or vandalism they see.

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CHAPTER 5

SUMMARY, CONCLUSION, AND RECOMMENDATIONS

5.0. Introduction

This is the last chapter of the research. The chapter presents the summary, conclusion, and recommendations of the research.

5.1. Theoretical Frame Work and the Findings of the Study

The theory of project implementation by Fugate and Knapp was the one that was used in the research project. The theory was incorporated based on its explanation in project management, especially road construction. The findings of the research to some extent agree with the theory on several points. The theory states that several things can affect project implementation if not handled carefully. According to the findings such things that can affect project implementation include late disbursement of funds from the government confers which leads to late payment of salaries resulting in lack of motivation which in turn may lead to poor quality work as well as lack of proper relationship between the company and communities in which they are implementing the project as this may lead to theft and vandalism. The theory states that the road project manager has to devote more time and energy to human, financial, and technical variables as the key to the realization of project implementation and completion. Thus, the framework in road project implementation has to transform models into practice; timely disbursement of funds, engagement and involvement of relevant stakeholders and citizens, and use of competent project managers and staff. The study applied this theoretical approach because it encompasses and adequately incorporates all relevant stakeholders in road project construction to achieve the deliverables duration of the project cost. The theory agrees with the study on the fact that there is a need for good coordination among all project stakeholders to ensure good implementation as well as quality work.

5.2. Case Studies Related To the Research

5.2.1. Case Study 1

In Kenya, the road is the predominant mode of transport accounting for 93 percent of all freight and passenger traffic in Kenya, but costs are high (KACC, 2017). The road sub-sector is relatively large, with a total classified network of 160,886 km (of which 11,197 km is paved and 149,689 km are gravel or earth). The country's road construction projects are affected by several factors. Most roads fail to get finished in time due to several factors. Procurement of construction materials is a very big challenge. It seems procurement is mostly affected by corruption practices in the country (Andersen, 2019).

The Kenya National Highway Authority (KeNHA) is an autonomous agency for the management, development, rehabilitation, and maintenance of truck roads linking centers of international importance and crossing international boundaries or terminating at international ports. Kenya National Highway Authority's core functions are to construct, upgrade, rehabilitate, and maintain Class A, B, and C roads, implement road policies on National roads, and ensure adherence to guidelines on axle load control in the Traffic Act. Its other roles are to ensure that the quality of roads is by defined standards and to collect data on the use of national roads. The Authority is 100% owned by the Government as a state corporation established under Kenya Roads Act, 2007. In Kenya, budgetary provision and Procurement procedures affect the Timely completion of road projects. Most road projects implemented in the Northern and Eastern parts of the country were characterized by corruption cases especially by the government officials and the contractors right away from the bids submission stage to the construction stage. This affected time of completion and also the quality of the roads were compromised (Al-Momani, 2010).

5.2.2. Case Study 2

Malawi has since independence seen several road projects being implemented. Most of the time there have been recorded cases where road constructors face challenges during implementation. For example road construction between Neno and Mwanza districts, the contractor was not given enough funds for road completion and this resulted in the use of manual work thus without the use of machines. This was because the contractor could not manage to hire or use vehicles which could cost a lot of money that was released. In 2020, some community members demonstrated for lack of satisfaction with the way the project was being implemented and when queried, the construction manager explained that it was due to poor funding that led the company to build the substandard road. The same project saw workers striking for not being paid on time and also not having enough salaries. However, to the surprise of the citizens of the district tangible action was taken by the government either through the Ministry of local government or the Ministry of Transport (Chan, 2021).

5.2.3. Case Study 3

Political influence or interference has been a big challenge as far as construction projects are concerned. Mostly, construction projects are done to win an election and not necessarily to ensure continuity of development in the country (Banda, 2016). The same case with the Lilongwe Area-18 Senti road which was constructed when the country was near to general elections. The road was constructed when the ruling government was under pressure in the year 2019. Due to political influence, the road was poorly constructed simply because the ruling government looked more at outvotes than the quality of the road. The road was constructed to copy voters to vote for the party as a result the engineer did not construct the road following all the necessary engineering requirements for roads. Political influence played a big role in the way the construction was implemented. The road developed big potholes in less than a year after its completion. In this way, political interference affected the way the construction project was implemented. It is also reported that the way the construction company won the contract was somehow dubious because other companies with good track records submitted their bids but never succeed. When politicians interfere in road construction projects it becomes a very big challenge in quality assurance as was the case of the Area 18-Senti road in Lilongwe City (Chan, 2021).

5.3. Discussion of Findings

The study has revealed several challenges that road constructor face during the implementation of the projects. The research has found that these challenges which include late disbursement of funds from the government, political interference, and delayed removal of utility infrastructure as well theft.

The challenges faced by road contractors have several impacts both on workers as well as on the quality of work underway. The research found out that late payment of bills as well as salaries to their workers and fear or the feeling of insecurity are some of the impacts of the challenges that workers face during road construction.

The research also found some solutions to the challenges road constructors face during road construction projects. Some of the solutions include; timely disbursement of funds by the government to the contractor, and construction companies to ensure a good relationship with the surrounding communities, discussing with utility company providers to remove their infrastructure in good time as well as ensuring that there is no political interference in the award of contract and also in the way the construction companies are executing their work. Therefore, for the solutions to work there is a need to involve all stakeholders in road construction projects thus politicians, the Ministry of Transport and public works, city councils, community members, construction companies, and also other companies like the Water Board as well as ESCOM.

5.4. Recommendations

Based on the findings of the study, the researcher recommends that:

- Government should try as much as possible to ensure contractor are given their money in time to ensure they are not compromising on quality.
- Politicians should stop interfering in the operations or recruitment process of the contractors as this affects the company's policies and result in substandard work.
- There is a need to be a good working relationship between the Construction Company and utility companies like ESCOM and the water board.

- There is a need for construction companies to develop a good relationship with the communities around the construction site to avoid issues of theft and vandalism. A good relationship can also help the company because people may report people suspected of stealing the company's materials.

5.5. Social Work Intervention

The purpose of constructing roads is to serve other social work interventions such as hospitals, transporting goods and series to markets, and transporting people to perform various economic activities. Delays in completing road construction affect's provision of social services, which in turn negatively derails other developments (economic, technology). Thus, timely construction of roads improves social workers to access too hard to reach areas for social service delivery

5.6. Areas of Further Study

Other future researchers can consider doing the following research topics:

- The same research topic can be carried out but now focuses on the construction of other infrastructures like hospitals or schools.
- Research can also be done on the impact of the covid-19 pandemic on the construction industry
- Analyzing the impact of ICT convergence innovation on the performance of construction projects.

5.7. Conclusion

Based on the results of the research, there are several challenges road contractors face during the implementation process. The challenges include delayed payments from the government, political interference, theft, and vandalism as well as delayed removal of public utility infrastructure by utility companies. The most well-known result of these challenges is substandard work which makes the country not move forward in development activities.

REFERENCES

- Adam, J., and Kamuzora, F., (2018). *Research Methods for Business and Social Studies*. Tanzania: Mzumbe Book Project.
- Babbie, E. (2012). *The Practice of Social Research*, 6th Edition. London: Wadsworth Publishers.
- Banda K. (2021). *Infrastructure, Geographical Disadvantages, and Transport Cost*. World Bank Economic Review 15 (3): 451–79.
- Carrasco B. (2019). *Challenges to Infrastructure Development in Asia*. The Fifth Tokyo Fiscal Forum PRI-IMF-ADB Tokyo,
- Chitikara, K. (2017). *Construction project management 2nd ed*: New Delhi, McGraw Hill Edu Private
- David N., (2015). *Factors Affecting Completion of Road Construction Projects in Southern Africa*. International Journal of Scientific and Research Publications, Vol 5, Issue 11.
- David, W. S. (2020). *Deliver Complex Infrastructure Projects Successfully by Managing Uncertainty*. Second European Systems Engineering Conference, (pp. 1-9).
- Eriksson, P. E. (2013). *Exploration and exploitation in project-based organizations, Development and diffusion of knowledge at different organizational levels in construction companies*. International Journal of Project Management, 31(3), 333-341
- Fong, S. W. & Choi, K. (2020). Final contractor selection using the analytical hierarchy process, *Construction Management and Economics*, 18(5), 547-557.
- Forbes C. (2017). Creativity in Road Construction industry <https://www.forbes.com/sites/forbescoachescouncil/2017/12/21/15waysleaders->
- Foster v. and Shkaratan M, (2014). Malawi's infrastructure: A continental perspective. <https://doi.org/10.1596/1813-9450-5598>
- Helen, I. (2016). *An Investigation into Factors Affecting the Performance of Public Construction Projects*. Civil and Environmental Research, 8(1).

- Kamanga M. (2015). *Causes of delay in road construction projects in Malawi: technical paper*.
Journal of the South African Institution of Civil Engineering.
- Kothari, C. R. (2004) *Research Methodology: Methods and Technique*. (2nd ed) New Age
International Publisher
- Kothari, C. R. (2013). *Research methodology: Methods and techniques*. New Delhi:
WishwaPrakashn
- Kumar, N. (2016). National Development Banks and Sustainable Infrastructure in South Asia.
. <https://www.bu.edu/pardeeschool/files/2016/07/NDBSandSouthAsia.Final>
- Kumilamba, P.R. (2018). *Increasing returns and economic geography*. Journal of Political
- Kunaka C. (2020). *The Impact of Regional Liberalization and Harmonization in Road Transport
Services: A Focus on Zambia*
- Lloyd R. L. (2016). *Challenges, Performances, and Tendencies in Project Organization
Management*. World Scientific
- Moriel, R. S. (2017). Feasibility in Applying Agile Project Management Methodologies to
Building Design and Construction. http://digitalcommons.harrisburgu.edu/pmgt_dandt/22
- Mrożewski, M. (2020). *Exploring the Role of Project Management in Product Development of
New Technology-Based Firms*. Project Management Journal, 51(3), 294–311
- Munthali T. (2019). *Explaining High Transport Costs within Malawi*. World Bank.
- Olayiwola, W.K. (2019). Practice and standard of corporate governance in the Nigerian Banking
Industry. International Journal of Economics and Finance, 2(4), 178-189.
- Olugboyega, A. A. (2015), Indigenous Contractors' Perceptions of the Importance of Topics for
Contractor Training in Nigeria, Habitat International, 22(2), 137-147.
- Ruf, A.S. (2015). Innovation You Should Try with Your Team. [https://uxmag.com/articles/5-
methods-for-innovation-you-should-try-with-your-team](https://uxmag.com/articles/5-methods-for-innovation-you-should-try-with-your-team)

Vullings, R. (2019). *Creativity & Innovation Tools*.
<https://www.slideshare.net/ramonvullings/27-creativity-innovation-tools-final>

Werner, R. (2019). *Mega Construction Projects and Risks: An Anatomy of Ambition*.
Cambridge University Press

Windapo, A. (2017). Effects of cash flow on project delivery in the Nigerian construction industry,
Procs 11th Annual Built Environment Conference.

Word Bank Report (2020). <https://mwnation.com/malawi-ranks-poorly-on-infrastructure-development>

World Bank (2017). *World Development Report: Reshaping Economic Geography*. Oxford
University Press.



APPENDEX; QUESTIONNAIRE

An Assessment of the Challenges Faced by Road Contractors during the Implementation Process of Malawian Government Funded Projects: A Case Study of Kanengo - Area 18 Road Construction.

Dear Sir/Madam,

I am Joshua Shimon pursuing a Master’s Degree in Social Work – Project Management, at the DMI St Eugene University - Zambia. I am carrying a research on the topic: “**An Assessment of the Challenges Faced by Road Contractors during the Implementation Process of Malawian Government Funded Projects: Case Study**”. I, therefore, request you to participate in answering the following questions. The information you provide will be treated with confidentiality and will be used for academic purposes only.

Your cooperation will be highly appreciated.

Instructions:

- 1 Tick where necessary
- 2 Write your answer in the spaces provided
- 3 Please answer questions as honestly as possible

SECTION A

DEMOGRAPHIC DETAILS

1. What gender do you identify as?

- (a) Male (b) Female (c) Prefer not to say

2. What is your age?

- (a) 0 – 15 Years old (b) 15 – 30 Years old (c) 30 - 45 Years old
(d) 45 + Years (e) Prefer not to say

3. What is your Ethnicity?

- (a) African (b) Caucasian (c) Asian

(d) African-American (e) European (f) Prefer not to say

4. For how long have you been in Malawi?

(a) 0 – 3yr (b) 4 – 6yr (c) 9 – 12yr (d) 13 – 15yr (e) 16yr + (f) Prefer not to say

5. What is the highest level of education you have completed?

(a) Primary school (b) Secondary school (c) Tertiary (f) Prefer not to say

6. What is your marital status?

(a) Single (b) Married (c) Divorced (f) Prefer not to say

SECTION B

RESEARCH GUIDING QUESTIONS

7. What are the challenges you face as road contractors during the project implementation phase?

8. How do the challenges affect your performance as a contractor in the project implementation process?

9. How do the challenges affect your workers?

10. Do the challenges affect the quality of the project? If yes explain how.

11. How do they deal with the challenges?

12. What could be the best ways of dealing with challenges?

13. Clearly state your opinion about the implementation of road projects by the Roads Fund Administration. Do you think that the organizational structure has affected the rate at which projects supervised RDF is completed?

14. In road construction, the following are some of the challenges affecting road constructors during the implementation phase. In your opinion indicate by ticking, the extent to which the effect the road construction exercise in the past five years.

- a. Great extent
- b. To some extent
- c. Moderately
- d. Not at all
- e. Do not know

CHALLENGES FACED BY THE CONTRACTORS IN ROADS CONSTRUCTION	a	b	c	d	e
Community unrest/disruption					
Existing services and land/properties proclamation					
Time and financial constraints					
Cash flow					
Lack of proper planning					
Cost overruns					
Resources availability					
Delivery of materials, plant, and equipment					
Lack of details specifications					
Shortage of skilled laborers					
Lack of equipment and materials					
Performance guarantees					
Project duration/period					
Corruption of officials					
Political interference					
Unrealistic construction program					
Poor performance by the contractor					

15. Below are lists of outcomes of challenges on road construction projects. From your experience, please express/rate your opinion on the effect of the challenges on performance during the road construction implementation phase.

- a. Very high
- b. High
- c. Average
- d. Minor
- e. never

Effect of Challenges on Performance	a	b	c	d	e
Cost overrun					
Time overrun					
Low quality					
Dispute between parties					
Leadership removal					
Creating social and economic problems					