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The Effects of Financing on Completion of Government Road Projects: A Case of Kenya National Highway Authority

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Abstract

Maintaining steady completion of road construction projects in the government of Kenya has been an issue of concern to the government, stakeholders, and contractors. Therefore, there have been numerous cases of delays and non-completion of projects which have contributed to irreparable loss to the government and the economy as a whole. Studies done on road construction tend to concentrate on the success of the projects, to add more knowledge, this study sought to address the problem of completion of government road construction projects. This study sought to fill this gap by analyzing the effects of financing on the completion of government road construction projects in Kenya with special reference to the Kenya National Highway Authority. This research adopted a descriptive approach and the target population was composed of 240 management staff of the Kenya National Highway Authority. The researcher used a stratified random sampling procedure to select a sample size of 72 respondents. Quantitative data was collected using questionnaires and analyzed by the use of descriptive statistics and regression analysis. Findings revealed that financing had a positive and significant effect on the completion of government road projects. The project's budget is crucial and it has an influence in all areas of both project planning as well as implementation. It is crucial to keep track of expenses for various work packages and total costs in a project. The road project financier should produce a clear schedule of funds on all project cycles and have devoted qualified staff members who are capable of creating scenarios of effective timeliness and implementation. This makes timely funding and project planning easier to manage, and it can be useful for projects similar to the current project.

Keywords: *Financing, Completion of Government Road Projects, Kenya National Highway Authority*

1.0 Introduction

Globally, delay in construction projects is one of the most common, costly, complex, and risky problems encountered in construction projects' success. Construction projects take place all over the world, they entail building works, water works civil works, and road works. Every construction project has the following constraints; time, cost, and quality. It is common for skills delays during construction projects. Delays do not always result from a single catastrophic event. Delays can cause substantial damages to a firm. The construction industry has been frequented with occasional delays and disruptions causing time and cost overruns. A study conducted in France showed that delays and disruptions are sources of potential risks that

current studies are looking into ways to manage such as technical, social, economic, legal, financial, resource, construction, and commercial (Kikwasi, 2017).

In Africa, delays in the construction of government-funded project delivery is a common reality Hussin and Omran (2016) state that in Nigeria, seven out of ten projects surveyed suffered delays in their execution. Also cited by the same authors is Al-Moumani (2017) who observes that in Nigeria 5-10% of government construction pre-contract cost is based on contingency. This has been found inadequate which means extra financial commitments occasionally beyond the capacity of the owner. Clients are sometimes not prepared for this and so funds in terms of loans are sought to offset this additional cost. In a study carried out to examine construction project performance in Sudan, Olatunji (2015) observed that despite a large number of reported cases, construction ranging from the simplest to more complex project platforms have increasingly experienced cost overruns. This phenomenon is also similarly observed in Ghana where Dlamini (2021) observes that studies reveal an increase in cost overruns, delayed completion, and unsatisfactory and unmet project objectives in most construction projects. While investigating the subject of project delays in South Africa, Olatunji (2015) observes that it is a phenomenon that can be attributed to the inability of the client/his representative and the project team to have a comprehensive view of the construction project from inception to completion. Aibinu and Jagboro (2017), state that construction delay has become endemic in Nigeria. They therefore advance the need to create awareness of the extent to which delays can adversely affect project delivery.

In Kenya, construction projects are referred to as part of the main pillars contributing to economic growth. Delays in Kenyan construction projects are said to be a common and re-occurring phenomenon and are experienced in any sector that delivers services through project construction (Msafiri, 2015). The government of Kenya and its developing partners continue to allocate huge financial resources to finance development. However, the benefits intended for the developments are partly or never realized due to unsuccessful project implementations. Specific, research undertaken to investigate what ails construction projects in Kenya, especially in the public sector provides insights into what is said to be the major causes of project delays including poor planning, poor quality and risk measures, poor communication, and poor stakeholder involvement (Kagiri & Wainaina, 2018).

Morris (2014) stated that delays and cost overruns in public sector investments can raise the capital-output ratio in the sector and elsewhere bringing down the efficacy of investments. The government of Kenya invests in building facilities such as schools and institutions, hospitals, residential developments for its workers, offices, and infrastructures like roads, water, electricity, and telecommunication. These facilities consume resources and time. Thus, successful management of processes employed in the acquisition of these assets is to a large extent, determined by the amount of resources expended, time taken, and quality when compared to similar projects. Infrastructure includes the capital required to produce economic services from utilities (like electricity, telecommunication, and water) and transport (roads, bridges, seaports, and airports) and are central to promoting economic activities (Ministry of Transport, Infrastructure, Housing, Urban Development & Public Works Strategic Plan, 2018-2022).

1.1 Problem Statement

The success of a construction project is critically affected by the capacity of the implementing firms, project planning, and nature of the contract, and the stability of the economic environment. However, there seems to be no agreement among scholars and practitioners as to

the nature of the causes of delays in construction projects. There is no consensus as to the principal causes of delays in public construction projects. For instance, Aibinu *et al.,* (2017) argue that the main cause of delay is poor planning. According to Frimpong (2016), poor risk management is to blame while the lack of skills and intellectual ability among contractors is the main reason. Other causes that have been highlighted include; poor organizational culture and poor government policy guidance (Karimi, 2018). In Kenya, more than 40% of all project failures leading to litigation arise from delays in project completion (Kagiri, & Wainaina, 2018).

The increase in project delays in the construction industry is hurting the economy because it results in wastage of resources, enhanced costs of projects, and frustration among customers, yet construction is one of the principal sectors that can revitalize economic growth in Kenya. Investment in construction projects and related infrastructure and services has multiple direct and indirect effects. It triggers forward and backward linkages through additional investment in the manufacturing of building materials, transport, and government (GOK, 2016). Unfortunately, delays in large construction projects particularly buildings, will continue to plague the construction industry in the foreseeable future unless strategic measures are taken by the industry. The government may lack sufficient measures to address the problem. Although research has been done to identify the factors that influence project rates in large construction projects in Kenya, the industry still experiences delays (Alaghbari & Salim, 2015). This is attributed to the fact that there is still a lack of information on what causes delays in government construction projects.

1.2 Research Objective

To investigate the relationship between financing and the rate of completion of government road construction projects.

2.0 Literature Review

2.2 Empirical Review

A report published by the World Bank on the state of redoing the major urban roads in the Tennessee Valley USA after the deadly Tsunamis insisted on only two major factors that will be central in determining the time a project will take to be effectively constructed. The two aspects key to every construction contract according to the World Bank (2010) are time and money. According to Dissanayaka and Kumaraswamy (2014), with the items of time and money, the essence of a construction contract can be defined. For a specified sum of money, a road construction contractor for example will be required to perform within the specified period (Chism & Armstrong, 2015). When every investor ventures in a construction project therefore they invest money within a specified time and expect the investment to repay itself. As such timely completion of the project ensures the cost incurred to be the necessary project cost. Any delay leads to cost overruns which raise the project cost.

Indeed Hussin and Omran (2016) stated that 70% of the projects abandoned in Malaysian transport construction projects were due to financial problems of developers, contractors, the local and national governments, and stakeholders like the donors. In a similar study carried out by Piper (2016) in Malaysia and Madagascar, he found out that between 1999 to 2017 up to 71% of the roads and other construction projects that in a way failed or took longer than planned for or changed the dates of commencement than the planned dates were as a result of squeezed financial allocation and the contractual times agreements that were never practical. The repair of the main road linking the major international airport in Madagascar and the capital city's

CBD took long by 3 years between 2018 and 2016 due to limited financial resources and the then political unrest due to coups.

According to Fugar and Agyakwah (2010), adequate cash flow is the hub around which everything else revolves. Lack of cash flow adversely affects projects by not only delaying them but also reducing work morale due to delay or non-payment of wages of workers, sub-contractors, and suppliers among others. The challenge with a lack of finances for projects is the identification of ways to eliminate or at least reduce the occurrence of the same. Alhomidan (2018) observed payment delays, contractor financial status, owner financial status, fluctuation in exchange rates, bank loan policies, inflation, and monopoly as the main factors contributing to financial distress in projects.

Project delays can be observed by several indicating factors. One significant factor is owners' performance in making payments to creditors. Prolonged time taken or required in procurement and making payments is a strong indicator that a company is facing financial difficulties (Alfred, 1980). He further observed that due to the high lending rates on investment borrowing, contractors are not able to attain the required financial support they require to enable them to manage projects they are undertaking. This then leads to financial constraints hence delaying projects.

A study that looked at the projects delayed in East Africa focused on major road projects that link Kenya, Tanzania, Uganda, and by extension, Burundi in 2016 and found out that the governments of Kenya and Uganda were affected up to the tune of 45% roads construction projects (GOK, 2016). Among the cited hindrances include poor financial management, corruption, and limited financial resources due to project finance diversions. Dlamini (2021) argued that, in government projects like those managed by KRB, KeRRA, KURA, and KeNHA. There were continued payments that took longer time and this also affected the project's timely completion negatively. It was not quite easy to understand the entire construction process from inception to completion especially when the finances provided were never enough to hire qualified personnel who had the first skills in these projects. This was because even for the most experienced professional hand, there were uncertainties posed by the environment, soil conditions, climate, political situation, and even the economic situation that needed more than an individual expert or local expert at times; who most of the times were preferred by local contractors just because they were relatively cheap labour. This uncertainty due to various factors raised an element of risk in construction project management. Any risk needed to be mitigated and risk mitigation called for big financial investments. A good risk management strategy was then needed to be put in place and properly implemented for a timely project implementation. This in the end retained the financial viability of the project as an investment. The overall lack of finance to complete a project, or delays in the payment of the services by the project owners or clients led to significant problems (Hussin & Omran, 2016).

In Kenya, there were enough cases of project failure to meet project timely completion of the construction projects. It has been contended that the diverse and multifaceted nature of construction projects makes it difficult to plan for, forecast, manage, and control (Ganiyu & Zubairu, 2015). As a construction project is an investment that should in the end make economic sense, there was therefore the need for the construction professionals to offer tangible solutions in terms of overcoming construction delays. Projects were strategic activities initiated to create economic value and competitive advantage (Olatunji, 2015). The key to financing projects is sustainability. The traditional forms of financing projects had been equity and debt. However, in the recent past innovative ways of financing projects have come up and these

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included special project vehicles and venture capital. Construction projects were also funded by multilateral bodies and foreign aid.

Contributions to the delay emanating from the government/owner of these road projects included late release of funds. If the owner/government does not pay the services of the contractor in time, then the project implementation is greatly affected by the contractors' poor cash flow. This affected the contractors' ability to ensure a sustained supply of construction materials. Therefore, the owners' financial position greatly affected project finance flows which influenced construction project completion. Olatunji (2015) identified project finance as one of the constraints or circumstances/situations which outside the immediate control of parties to the contract agreement but still affect the smooth flow of scheduled activities. Observers agreed that if payment by the project owner was slow, the contractor began to commit fewer resources to a project, and even eased work as cash flows became a problem.

3.0 Methodology

This research adopted a descriptive approach to the effects of financing on the completion of government road construction projects in Kenya. The questionnaire consisted of closed and open-ended questions. The target population was 240 management and technicians. The researcher used a stratified random sampling procedure to select a sample size of 72 respondents. Quantitative data was collected using questionnaires and analyzed by the use of descriptive statistics and regression analysis and presented using tables. While conducting the data collection, the researcher strictly adhered to all the rules regarding conducting research, the researcher treated the participants with respect as all humans are presumed to be free and responsible persons, and the researcher was honest and portrayed a high level of integrity while conducting the study.

4.0 Results and Discussion

4.1 Descriptive Statistics

This study used to mean and frequency percentages to present the summary measures of the sample that was observed. Analysis of descriptive statistics was conducted based on the data collected on the variables that were the target of this study. The basic feature of the observed sample formed the basis for quantitative data analysis for this study.

The study sought to determine the relationship between financing and the rate of completion of government road construction projects. The respondents were asked to indicate how the financial factors have influenced the delay of government road construction projects using a scale of 1=very great extent, 2= great extent, 3=fair extent, 4=little extent 5= very little extent. The results are presented in Table 1.

Table 1: Influence of finance on completion of government road construction projects

Indicators	1	2	3	4	5	Mean
Financial management	39.7%	28.7%	16.8%	9.3%	5.5%	1.53
Sources of finance	42.5%	23.7%	16.5%	9.7 %	7.6%	1.67
Project finances diversions	44.3%	29.7%	14.7%	8.1%	3.2%	1.72

Source: Field Data (2023)

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The findings in Table 1 revealed that 39.7% of the respondents noted that financial management to a very great extent influences the completion of government road construction projects as supported by a mean of 1.53. Also, the source of finance very great extent influences the completion of government road construction projects as noted by 42.5% of the respondents. Further, 44.3% of the participants noted that project finance diversions very great extent influenced the completion of government road construction projects. The challenge with a lack of finances for projects is the identification of ways to eliminate or at least reduce the occurrence of the same. Alhomidan (2018) observes payment delays, contractor financial status, owner financial status, fluctuation in exchange rates, bank loan policies, inflation, and monopoly as the main factors contributing to financial distress in projects. As such timely completion of the project ensures the cost incurred to be the necessary project cost. Any delay leads to cost overruns which raise the project cost. The findings also concur with the findings of a study by Dlamini (2021) who established that some of the hindrances to the timely completion of road projects include poor financial management, corruption, and limited financial resources due to project finance diversions.

From the triangulation qualitative data, it was established that delay in payment resulted in slow progress on site, as many sub-contractors and suppliers were subjected to financial difficulties; hence, no material was delivered to the site. Delayed payment by a party who is involved in the process of payment claims may influence the supply chain of payment as a whole. Problems in payment at the higher end of the hierarchy will lead to a serious knock-on cash flow problem down the chain of contracts. This will result in delays in the completion of road construction projects.

4.2 Regression Coefficient

The relationship between financing and completion of government road projects was investigated through regression. Results are shown in Table 2.

Table 2: Regression Coefficients Results

Variables	**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
	B	**Std. Error**	**Beta**		
(Constant)	.363	0.242		3.219	.002
Financing	0.369	0.0213	1.432	2.204	.002

Source: Researcher (2023)

The estimated equation is:

Y= 0.363+0.369X

Where Y = Completion of government road projects

X_1 = Financing

The findings revealed that financing had a positive and significant effect on the completion of government road projects (β=0.369, p=0.002). A unit increase in financing would result in the completion of government road projects by a factor of 0.369 units. The findings agree with those of Bennett and Gordon (2014) who found that funding problems are one of the causes of delays and disruptions of road construction projects.

5.0 Conclusion

From the results, the study concluded that financing positively and significantly impacts the completion of construction road projects. The project's budget is crucial and it has an influence in all areas of both project planning as well as implementation. It is crucial to keep track of expenses for various work packages and total costs in a project. Allocating the overall cost estimate to individual work items to establish a baseline for measuring the success of a project is key. Identify situations where project labor resources are being used on multiple projects to ensure the smooth flow of the project and its success.

6.0 Recommendations

The road project financier should produce a clear schedule of funds on all project cycles and have devoted qualified staff members who are capable of creating scenarios of effective timeliness and implementation. This makes timely funding and project planning easier to manage, and it can be useful for projects similar to the current project.

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