



(RESEARCH ARTICLE)



Impact of abandoned state-funded construction projects in the central region of Ghana

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Global Journal of Engineering and Technology Advances, 2023, 17(03), 006–013

Publication history: Received on 20 October 2023; revised on 28 November 2023; accepted on 30 November 2023

Article DOI: <https://doi.org/10.30574/gjeta.2023.17.3.0239>

Abstract

The growth of every nation is measured by Government/State-funded projects performance, but almost all the developing nations have abandoned Government/State-funded projects. The study sought to find out the state of abandoned State-funded construction projects within Komenda Edina Eguafo Abirem Municipality (KEEAM) in the Central Region of Ghana. The population of the study was made up of 160 construction professionals (Consultants and Contractors). A sample size of 81 respondents was determined based on Cochran's formula, due to the lack of a definite number of consultants and contractors within KEEAM. The questionnaire was administered personally to the respondents and the data collected was analyzed using descriptive statistics. Findings show that most of the Government/State-funded projects were supervised or executed by consultants and that, GETFund projects were mostly abandoned. Inappropriate project planning and scheduling were found to be the major cause of abandoned State-funded projects. Sometimes, corruptive behaviours of construction professionals and lack of commitment of construction professionals. These had contributed to the difficulty in foreign loan acquisition. Effective decision-making by construction professionals was the most appropriate measure to use in mitigating the effect of abandoned State-funded projects. The government of Ghana should take the lead in an effective project risk management process to safeguard the interests of both parties involved in the GETFund projects.

Keywords: Abandoned Projects; Consultants; Contractors; Construction; State-Funded Projects; Ghana.

1. Introduction

The principal way in which modern societies increase their worth is through construction projects (Andelin et al., 2015). Thus, the creation of physical assets is implemented by governments in the form of infrastructure (Sharma, 2012). Some of the infrastructure generated by the state include; houses, schools, hospitals, roads, dams, bridges, airports, harbours, etc. (Statistics Canada, 2019; Mahajan, 2019; Sharma, 2020). Consultants and Contractors are responsible for the execution of these infrastructures with their acquired expertise and experience, to ensure the successful completion of public construction projects (Olatunji et al., 2014). The success criteria of a project require that the project is completed on time, within budget, and meets the expectations of stakeholders (Tabish and Jha, 2012). Thus, state project performance is key to every nation because the projects measure the growth of the nation (Olatunji et al., 2014, Alzahrani and Emsley, 2013). Tenner (2014) defined a consultant (Architects, Land surveyors, Quantity surveyors, Civil engineers, Structural engineers, Electrical engineers, Mechanical engineers, etc.) as an intellectual worker with expertise knowledge, and skills, who provide professional services to an individual or organisation. The consultants generally work to advise the client on construction project matters and develop standardised designs, plans, and other essential project documents to meet the needs of the client (Olatunji et al., 2014). The engaged contractor for the project must possess the requisite skills for financial and human resource management, project administration, and quality control. Aghimien et al. (2018) indicated that consultants and contractors are very important to the realisation of a

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client's infrastructural dream, because of their roles played in the project. The major problem that plagues State-funded construction projects is the abandoning of projects. Ahmed and Ahmed (2014) attested that the problem of abandoned State-Funded projects is a worldwide phenomenon, that is considered an undesirable outcome by project stakeholders and the public. Some infrastructural projects that were abandoned are roads, bridges, dams, industrial structures, communication projects and many more (Ogunola and Olalusi, 2012). Many researchers such as (Yap, 2013, Ihuah and Benebo 2014, and Doraisamy *et al.*, 2014) defined abandoned project as the complete halt and exit from project works due to many stagnating problems arising in the course of project execution. The number of state government abandoned projects are high in almost all the developing countries (Nwachukwu, *et al.*, (2010). Abandoned construction projects bring about problems that affect the clients (government), users, the built environment and the economy of the nation (Ihuah and Benebo, 2014). In Ghana, it is common to see projects that have started well to be abandoned in its later stages (Amao-Abban, 2017; Amade *et al.*, 2015; Amponsah, 2013). Williams (2017) emphasized that almost a third of state-funded construction projects do not see completion. This shows the gravity of the state-funded project abandonment problem in Ghana. Some common examples of state-funded projects abandoned in Ghana include; Affordable Housing Unit Projects, Ghana @50 projects, forgetting numerous educational infrastructural projects in rural areas etc (Damoah, 2015). The Komenda sugar factory project has emerged as of the latest abandoned state-funded projects in the central region of Ghana and many more continue to surface as time passes (Appiah, 2021, Yap, 2013). Loss and wastage of materials, plant and equipment occurred as a result of abandoned projects in Ghana (Damoah *et al.*, 2018). Others include; economic impacts, loss of opportunity for the public to benefit from the intended purposes of the projects, bad reputation of the consultants and contractors engaged for the projects and pressure of usage on existing governmental projects (Ihuah and Benebo, 2014; Ojo and Aroje 2016). It is important to carry out an investigation into the occurrence of abandoned State-Funded construction projects, to ascertain the causes and effects and measures required to minimise the rampant abandon State-Funded projects in Ghana. The study sought to find out the state of abandoned State-funded projects within Komenda Edina Eguafu Abirem Municipality, in the Central Region of Ghana

1.1. Causes and Effect of Abandoned State-Funded Construction Projects

The actions and roles of consultants and contractors engaged in the projects has contributed to abandoned of State-Funded projects in Ghana (Damoah (2015). Yap (2013), Amponsah (2013), and Ihuah and Benebo (2014) pointed out the following actions and roles (inadequate feasibility studies, poor contract administration, inappropriate project planning and scheduling, poor project supervision and control, poor communication between consultants and contractors, corruptive behaviours of consultants and contractors, poor tendering process, poor project risk management, unclear lines of responsibility among consultants and contractors, inaccurate project cost estimation and poor project designs) of consultants and contractors that lead to the abandonment of state-funded construction projects. The effect on an abandoned State-Funded project dwindles economic and developmental growth of a country (Doraisamy *et al.*, 2015). Many studies (Aluko, 2008; Carrero *et al.*, 2009; Efenudu, 2010; Olusegun and Michael, 2011; Abdul and Abdelnaser, 2011; and Ihuah and Benebo, 2014, brought up various effects of project abandonment from their studies. Some of which were wastage of precious resources, decrease in the value of property, low employment opportunities, decreasing standard of living, reduction in economic activities, and the loss of beauty in communities and neighbourhoods. Others includes the reduction in the total value of real properties, reduction in the total income gained from real property, the project becomes a disappointment to the state and the general public, poor modification of the environmental landscape, increase in environmental pollution, decrease in the attraction of investors in real properties, wastage of resources (financial and material), reduction in revenue accrual by the government in property tax, difficulty in foreign loan acquisition, coupled with frequent occurrence of vandalism and illegal activities at abandoned project sites.

1.2. Measures to Mitigate Abandoned State-Funded Project

In curtailing the abandonment of state-funded projects, a strong focus must be placed on implementing project success measures into state-funded projects (Saqib *et al.*, 2008). Success measures was defined by Ogwueleka (2016), as the inputs to a system of management or actions which positively influences the success of a project both directly and/or indirectly. Saqib *et al.*, (2008) suggested that if steps are taken by the project participants (consultants and contractors) to refrain from actions that lead to unsuccessful projects, they can easily predict and achieve a successful completion of state-funded projects. Good project team leadership, excellent partnership between contractors and consultants, clarity of designs and innovative concept, effective planning and control, short and long-term benefits management and risk management were the success measures (Boyer *et al.*, 2008). Park (2009) was of the view that measures needed for a successful project were clarity of contract, accurate estimate of the project budget, effective material quality checks, good relationships between the project stakeholders based on mutual trust, competency of consultants and contractors, good leadership and effective team management, as well as site safety management. Ogwueleka (2016) pointed out that the type of project, its consultants and contractors, technological implications and its specifications affect the project's

success measures. Amade *et al.*, (2015) on the other hand, discovered various measures needed for the success of a State-Funded Project and to which part of the project they apply to as stated in table 1.

Table 1 Measures to Contain State-Funded Project and Ensure Project Success

Categories of Factors	Success Factors of a Project
Factors related to Project Management	Effective decision making of consultants and contractors Effective monitoring of project activities Effective planning and scheduling methods Suitable and in-depth project risk management
Factors related to the Contractor	Effective site supervision of project works Good cash flow and financial resource management skills of the contractor
Factors relating to the Procurement	Effective system of procurement
Factors related to the Design Team	Good relationship between consultants and contractors Effective communication between the consultants of the project.

Source: Amade *et al.*, (2015)

2. Methodology

The population for the study was made up of all construction professional or consultants and contractors within Komenda Edina Eguafo Abirem Municipality under the Government/State-Funded Projects in the Central Region of Ghana. A total of one-hundred and sixty (160) professionals (Architects, engineers, quantity surveyors, and procurement officers) were obtained. sample size for the study was determined based on Cochran's formula (1977) due to the unavailability of a definite number of consultants and contractors within the Komenda Edina Eguafo Abirem Municipality.

Where s = sample size for unknown population

$Z = 1.96$ (Z score of based on the chosen confidence level of 95%)

p = estimated population proportion (70%)

m = limit of error (10%)

This means that the sample size required for the study is 81 with a level of confidence of 95% and a limit of error of 10%.

The questionnaire used for the study was designed based on the research objectives and administered personally to the respondents in order to acquire relevant data for the study (Ajayi, 2017). Questionnaire was the type of quantitative research design adopted by the researcher to be able to collect data that is measurable from the respondents (DJS Research, 2020). The questionnaire was divided into three sections: Section 'A' – causes of abandoned state-funded projects; Section 'B' - effect of abandoned state-funded projects; Section 'C'- measures to mitigate occurrence of abandoned state-funded projects. Respondents were asked to rate the questions based on their understanding on a Likert scale of 1 to 5, where 1= Strongly Disagree; 2= Disagree; 3=Neutral; 4= Agree; 5= Strongly Agree. Descriptive statistics was used for the data analysis and the results are presented in the form of frequencies, percentages; mean, standard deviation and mean score ranking. The preceding section presents the findings of the study.

3. Findings

Table 2 shows findings from respondents on types of projects they have been involved under the categories; Government of Ghana (GOG), Road fund, GETFund, District Assembly Common Fund (DACF) and World Bank projects. The majority of the respondents (40.7%) had been involved in GETFund projects which was found as the major type of project under the Government/State-funded projects that was mostly abandoned. This was followed by Government of Ghana (GOG) projects (28.4%) and District Assembly Common Fund (DACF) project (25.9%) respectively. The least

among the type of projects under the Government/State-funded projects that was abandoned was World Bank and Road-Fund projects representing (2.5%) respectively.

Table 2 Type of Project

Type of Project	Frequency	Percentage
GOG	23	28.4
Road fund	2	2.5
GETFund	33	40.7
DACF	21	25.9
World Bank	2	2.5

3.1. Causes of Abandoned State-Funded Projects

Table 2 shows that inappropriate project planning and scheduling was the major cause of abandoned State-Funded project among the fourteen (14) factors was ranked first, with a mean of 4.12 and a standard deviation 1.077. This is followed by corruptive behaviours of construction professionals which was ranked second, with a mean of 4.10 and a standard deviation of 1.022 and lack of commitment of construction professionals which was ranked third, with a mean 4.09 and standard deviation of 0.902 respectively. The least cause of abandoned State-Funded project among the fourteen (14) factors was inadequate feasibility studies, with a mean of 3.83 and a standard deviation of 0.905.

Table 3 Causes of Abandoned State-Funded Projects

Causes	M	SD	R
Inappropriate project planning and scheduling	4.12	1.077	1
Corruptive behaviours of construction professionals	4.10	1.102	2
Lack of commitment of construction professionals to the project	4.09	0.902	3
Poor communication between project team members	4.07	0.972	4
Inaccurate pricing by the contractor	4.07	1.010	5
Poor project risk management	4.04	0.941	6
Poor project supervision and control	4.01	1.250	7
Incompetent construction professionals on the project	3.99	1.101	8
Poor contract administration	3.98	0.955	9
Poor tendering process	3.95	1.128	10
Inaccurate project cost estimation by consultants and contractors	3.95	1.193	11
Poor project designs	3.94	1.176	12
Unclear lines of responsibility among construction professionals	3.90	1.044	13
Inadequate feasibility studies	3.83	0.905	14

M-Mean; SD-Standard Deviation; R-Ranking

3.2. Effect of Abandoned State-Funded Projects

Table 3 shows that the difficulty in foreign loan acquisition was the major effect abandoned State-Funded projects among the eleven (11) factors and was ranked first, with a mean of 4.14 and a standard deviation of 0.997. This is followed by frequent vandalism and illegal activities at abandoned project sites, with a mean of 4.07 and a standard deviation of 1.022 and wastage of financial and material resources, with a mean of 4.07 and a standard deviation of 1.149 respectively. The least effect on abandoned State-Funded projects among the eleven (11) factors was disappointment of users in the abandoned project, with a mean of 3.93 and a standard deviation of 1.004.

Table 4 Effect of Abandoned State-Funded Projects

Effects	M	SD	R
Difficulty in foreign loan acquisition	4.14	0.997	1
Frequent vandalism and illegal activities at abandoned project sites	4.07	1.022	2
Wastage of financial and material resources	4.07	1.149	3
Increase in environmental pollution	4.06	1.034	4
Loss of tax monies by the government	4.04	1.123	5
Reduction in economic activities in the nation	4.02	1.244	6
Reduction of revenue accrual by the Government	4.02	1.072	7
Loss of beauty in the communities and neighbourhood	3.96	1.156	8
Decrease in the standard of living of the nation's inhabitants	3.95	1.139	9
Low employment opportunities	3.94	1.122	10
Disappointment of users in the abandoned project	3.93	1.004	11

M-Mean; SD-Standard Deviation; R- Ranking

3.3. Measures to Mitigate Abandoned State-Funded Project

Table 4 shows that effective decision making by construction professionals was the effective decision required as a measure to mitigate abandoned State-Funded projects among the thirteen (13) factors and was ranked first, with a mean of 4.00 and a standard deviation of 1.140. This is followed by suitable and in-depth project risk management with a mean of 3.99 and a standard deviation of 1.101 and good relationship between project team members with a mean of 3.95 and a standard deviation of 1.224 respectively. The least among the thirteen (13) factors was the minor decision taken as a measure to mitigate abandoned State-Funded projects was good cash flow of the contractor with a mean of 3.75 and a standard deviation of 1.337.

Table 5 Measures to mitigate Abandoned State-Funded Projects

Measures	M	SD	R
Effective decision making by construction professionals	4.00	1.140	1
Suitable and in-depth project risk management	3.99	1.101	2
Good relationship between project team members	3.95	1.224	3
Effective supervision of works	3.95	1.254	4
Effective system of procurement	3.90	1.221	5
Effective communication between the various stakeholders of the project.	3.89	1.235	6
Effective planning and scheduling of works	3.88	1.215	7
Accurate and in - depth conduction of the project feasibility studies	3.88	1.095	8
Accurate estimation of the project budget	3.87	1.326	9
Clarity of contract documents	3.87	1.198	10
Clarity of project designs	3.87	1.239	11
High commitment of construction professionals to the project	3.85	1.226	12
Good cash flow of the contractor	3.75	1.337	13

M-Mean; SD-Standard Deviation; R-Ranking

4. Conclusion and Recommendation

The study sought to find out the state of abandoned State-funded construction projects within Komenda Edina Eguafio Abirem Municipality (KEEAM). GETFund projects were most affected abandoned Government/State-funded projects and found to be as a result of inappropriate project planning and scheduling, corruptive behaviours and lack of commitment of construction professionals which had led to the difficulty in foreign loan acquisition. Effective decision making by construction professionals was most appropriate measure required to mitigate the effect of abandoned State-Funded construction projects. All GETFund projects should be reviewed on periodic bases and immediate action taken. Planning and scheduling of projects works should be carried out by both the Architects and contractors/consultants of the projects. The government of Ghana should open a foreign window in support of abandoned projects. Professional with suspicious character and lackadaisical attitudes should be written off of the project, and security should be tightened at all sections of the project's sites. An effective project risk management should be conducted for all state-funded construction project before and during its execution.

Compliance with ethical standards

Acknowledgement

The authors wish to acknowledge the effort of final year Higher National Diploma students for their contribution during the field work.

Disclosure of conflict of interest

No conflict of interest exists.

Statement of Informed consent

Informed consent was obtained from all individual participants included in the study.

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