

Assessing the inefficiencies in the execution of GET Fund construction Projects in the Upper West Region, Ghana



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ABSTRACT: The fundamental objective of GETFund is to provide money to augment government budgetary allocations in the development of educational infrastructure at all stages of education, from pre-tertiary to tertiary level, as defined in the GETFund Act, 2000 Act 581. The purpose of the research is to investigate the inefficiencies in the execution of GETFund construction projects, identify variables impacting GETFund projects, and propose effective ways to increase successful GETFund project execution in the Upper West Region. The descriptive survey research method was adopted for the study. Sixty-five clients, twenty-one consultancies, and sixty-two construction firms totalling one hundred and forty-eight were sampled for the study. Questionnaires were the major approach utilised for data gathering. Descriptive statistics were employed to examine the data. Findings from the study indicated that the most important difficulties that hinder efficient implementation of GETFund building projects are political and financial in nature. Furthermore, the most significant problems confronting effective GETFund construction project execution in the region are cost considerations and schedule aspects. It is recommended that a new approach to contract award procedures be instituted by giving less weight to prices and more weight to the capacity, past performance, and adherence to performance measurement of contractors bidding for the projects, irrespective of their political, cultural, and religious persuasions.

KEYWORDS: GETFund, Inefficiencies, Construction Projects, Educational infrastructure, Execution.

INTRODUCTION

The success of a construction project is judged by meeting the criteria of cost, time, safety, resource allocation, and quality as determined by the client (Muir, 2005). Thus, the purpose of construction project management and assessment is to achieve goals and objectives through planned expenditure of resources.

Construction project management involves numerous parties, various processes, different phases and stages of work and a great deal of inputs from both the public and private sectors with the major aim of bringing the project to a successful conclusion (Takim & Akintoye, 2002). The assessment of construction projects in Ghana brings to the level of success, in carrying out construction projects depends on the quality of proper management techniques, financial, technical and the organizational performance of the respective parties. The assessment of the execution of various construction projects brings to fore the delay in project execution as major problem facing the Ghanaian construction industry. It is endemic and its economic and social impacts are huge and devastating.

Frimpong & Oluwoye, (2003), reported that, to a large extent, consultants, client, and contractors agreed that project financing, economic and natural conditions and material supply were some of the major categories of causes of delay and cost overrun factors.

The construction industry is an important sector of the Ghanaian economy. It contributes an average of 8.5% of the Gross Domestic Product GDP (Ghana Statistical Service, 2013). It employed 2.3% of the economically active population in 2002 (Amankwa, 2003). The industry provides many products for other industries or commodities to be consumed. As Ghana aspires to become a middle-income nation by 2020, and with the recent discovery of oil in commercial quantities, the role of the construction industry is absolutely important.

Turner (1993), defines project as an endeavor in which human, material and financial resources are organized in a novel, to undertake a unique scope of work, of given specification, within constraints of cost and time, so as to achieve beneficial change

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by quantitative and qualitative objectives. His definition of project emphasizes on organization of resources and uniqueness of the scope of work. Hence, it is evident that, assessing and evaluating the management and planning are essential elements that deals with construction risks and devise safe working methods throughout all stages of the construction process from inception through the design, tendering, construction and commissioning stages of the project. This research is limited to the assessment of GETFund sponsored public sector construction projects in the Upper West Region. The study is further aimed at identifying and analyzing factors and challenges affecting efficient execution of construction projects by contractors within the Region. The analysis will reflect the strength of each factor and rate at which it influences failure and abandonment of construction projects in the Upper West Region.

LITERATURE REVIEW

Inefficiency in project execution occurs in every construction project and the magnitude of these varies considerably from project to project of which GETFund construction projects are of no exception, so it is important to define the actual causes in order to minimize and avoid inefficiency in any construction project. Thus, exploring the reasons for delays is one of the prerequisites of keeping the cost within budget and of good construction time performance (Alaghbari et al., 2007).

The failure of any construction project is mainly related to the problems and failure in performance. Moreover, there are many reasons and factors which attribute to such problem. Long et al. (2004), remarked that performance problems arise in large construction projects due to many reasons such as; incompetent designers/contractors, poor estimation and change management, social and technological issues, site related issues and improper techniques and tools. Navon (2005), stated that the main performance problem can be divided into two groups: (a) unrealistic target setting (i.e., planning) or (b) causes originating from the actual construction (in many cases the causes for deviation originate from both sources).

Chan and Kumaraswamy (2002), conducted a survey in Hong Kong and Jordan respectively to evaluate the relative importance of delay factors in construction projects. Their findings indicate that, poor risk management and supervision, unforeseen site conditions, slow decision making involving all project teams, client-initiated variations, necessary variations of work, the owner interference, inadequate contractor experience, financing and payments, labour productivity, slow decision making, improper planning, and subcontractors are among the top most important factors contributing to inefficiency in project execution.

Projects customarily measure results by periodically accounting for planned progress and cost. Measuring results is important in that they give the management team confidence that achievements are made, but they do not identify the factors that cause poor performance. While it is generally recognized that "what gets measured improves", when it comes to actual efficiency or productivity, most projects end up having difficulty collecting useful metrics that could help project owner and contractor determine how well the execution process is meeting requirements at any time (Kim et al., 2009). The execution process is made up of steps and work activities that take input resources, add value and produce the completed project-value being based on customer willingness to pay for the process step or activity. The execution process provides an excellent base for measurement: an execution process that is in control delivers good performance, and can be improved. Ling et al (2007), remarked that architectural, engineering and construction (AEC) firms may face difficulties managing construction project execution in China because they are unfamiliar with this new operating environment. Kim et al (2008), stated that international construction projects performance is affected by more complex and dynamic factors than domestic projects; frequently being exposed to serious external uncertainties such as political, economic, social, and cultural risks, as well as internal risks from within the project. According to Jim et al (2004), Labor is the major cost- and time-variable in project execution. Great value is therefore placed on workforce productivity, on 'doing more with less', to stay within budget and schedule, or do better. Efficiency of labor utilization is a key measure of construction productivity.

DATA BASE AND METHODOLOGY

The research design used for the study is descriptive survey. Data for the study was collected from a total of 69 public clientele, and 66 contractors with 22 Consultants from the four major firms in the region working on GETFund projects using a questionnaire. Data was analysed using SPSS version 25.

RESULTS AND DISCUSSION

Factors confronting efficient GETFund construction projects execution in the Upper West Region

In trying to find out the major factors confronting efficient GETFund construction projects execution in the Region, seven imaginable questions were raised by the researcher for the consultants, clients and contractors to rate their level of disagreement and agreement on all the seven major confronting factors in a Likert scale, where; SD&D: strongly disagree and disagree and A&SA: Strongly Agree and Agree. The results were displayed in table 2.1 below

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Table 2.1: Factors Affecting Performance of GETFund Contractors / Consultants /Clients

GROUPS/FACTORS	SD/D		N		SA/A		Mean	Std Dev	Rank
	Freq	%	Freq	%	Freq	%			
COST FACTORS									
Project labor cost	31	25.20%	6	4.90%	86	69.90%	2.45	0.87	6
Cash flow of the project	21	17.10%	4	3.30%	98	79.70%	2.63	0.76	4
Escalation of materials cost	6	4.90%	0	0.00%	117	95.10%	2.9	0.43	1
Liquidity of the organization	18	14.60%	2	1.60%	103	83.70%	2.69	0.71	3
Overhead cost	25	20.30%	1	0.80%	97	78.90%	2.59	0.81	5
Cost of variation orders	12	9.80%	0	0.00%	111	90.20%	2.8	0.6	2
Materials and equipment cost	31	25.20%	10	8.10%	82	66.70%	2.41	0.87	7
Project overtime cost	31	25.20%	10	8.10%	82	66.70%	2.41	0.87	7
Waste rate of materials	37	30.10%	12	9.80%	74	60.20%	2.3	0.9	10
Motivation cost	30	24.40%	20	16.30%	73	59.30%	2.35	0.85	9
AVERAGE	24.2	0.20	6.5	0.05	92.3	0.75	2.6	0.8	
TIME FACTORS									
Availability of resources	18	14.60%	6	4.90%	99	80.50%	2.66	0.72	2
Planned time for project cost	25	20.30%	6	4.90%	92	74.80%	2.54	0.81	3
Time needed to defects	31	25.20%	6	4.90%	86	69.90%	2.45	0.87	4
Average delay in payment	12	9.80%	2	1.60%	109	88.60%	2.79	0.6	1
Site preparation time	37	30.10%	0	0.00%	86	69.90%	2.4	0.92	5
AVERAGE	24.6	0.2	4	0.03	94.4	0.8	2.6	0.8	
QUALITY FACTORS									
Conformance to specification	25	20.30%	6	4.90%	92	74.80%	2.54	0.81	4
Quality of equipment and raw materials	12	9.80%	0	0.00%	111	90.20%	2.8	0.6	1
Availability of personnel	12	9.80%	0	0.00%	111	90.20%	2.8	0.6	1
Quality training/meeting	23	18.70%	3	2.40%	97	78.90%	2.6	0.79	3
AVERAGE	18	0.1	2.3	0.02	103	0.84	2.7	0.7	
PRODUCTIVITY FACTORS									
Management labor relationship	12	9.80%	1	0.80%	110	89.40%	2.8	0.6	2
Sequencing of work according to Schedule	0	0.00%	6	4.90%	117	95.10%	2.95	0.22	1
Absenteeism rate through projects	31	25.20%	12	9.80%	80	65.00%	2.4	0.87	3
Project complexity	43	35.00%	0	0.00%	80	65.00%	2.3	0.96	4
Number of new project/years	49	39.80%	4	3.30%	70	56.90%	2.17	0.97	5
AVERAGE	27	0.22	4.6	0.04	91.4	0.74	2.5	0.72	
CLIENT SATISFACTION FACTORS									
Information coordination between Owner	6	4.90%	0	0.00%	117	95.10%	2.9	0.43	1
Leadership skills for project	18	14.60%	6	4.90%	99	80.50%	2.66	0.72	2
Number of disputes between owner	25	20.30%	10	8.10%	88	71.50%	2.51	0.81	3
AVERAGE	16.3	0.13	5.3	0.04	101.3	0.82	2.4	0.65	
INNOVATION AND LEARNING FACTORS									
Number of reworks	37	30.10%	12	9.80%	74	60.20%	2.3	0.9	5
Learning from best practices	12	9.80%	0	0.00%	111	90.20%	2.8	0.6	4
Training the human resources	18	14.60%	2	1.60%	103	83.70%	2.69	0.71	2
Learning from own experiences	31	25.20%	6	4.90%	86	69.90%	2.45	0.87	3
Review of failures	18	14.60%	0	0.00%	105	85.40%	2.71	0.71	1
AVERAGE	23.2	0.19	4	0.03	95.8	0.78	2.5	0.75	

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ENVIRONMENTAL FACTORS									
<i>Climate condition on site</i>	25	20.30%	12	9.80%	86	69.90%	2.5	0.81	1
<i>Waste around the site</i>	62	50.40%	61	49.60%	0	0.00%	1.5	0.5	3
<i>Noise level and air quality</i>	37	30.10%	6	4.90%	80	65.00%	2.35	0.91	2
AVERAGE	41	0.3	26	0.2	55	0.4	2.1	0.7	
OVERALL AVERAGE	25	0.2	7.6	0.1	91	0.7	2.5	0.7	

Source: Field Survey, 2019

Cost Factors

The cost factors affecting performance of GETFund results as shown on table 4.4 indicate that: project labor cost 25.20% (n = 31) were strongly disagree/disagree, 4.90% (n = 6) respondents were neutral to the statement while 69.90% (n=86) were strongly agree/agree of the statement. On cash flow of the project: 17.10% (n = 21) were strongly disagree/disagree, 3.30% (n = 4) respondents were neutral to the statement and majority of the respondents 79.70% (n = 98) were strongly agree/agree to the issue at hand. On escalation of materials cost: 4.90% (n = 6) were strongly disagree/disagree, 0.0% (n = 0) respondents were neutral to the statement while, 95.0% (n = 117) were strongly agree/agree. On liquidity of the organization: 14.60% (n = 18) were strongly disagree/disagree, 1.60% (n = 2) respondents were neutral to the statement while 83.70% (n = 103) were strongly agree/agree level representing the majority group of the respondents. On overhead cost: 20.30% (n = 25) were strongly disagree/disagree to the statement, 0.80% (n = 1) respondents were neutral to the statement while 78.91% (n = 97) were strongly agree/agree level representing the majority group of the respondents. On cost of variation orders: 9.80% (n = 12) were strongly disagree/disagree and neutral to the statement, 0.0% (n = 0) respondents were neutral to the statement while 90.20% (n = 111) were strongly agree/agree level representing the majority of the respondents. On materials and equipment cost: 25.20% (n = 31) were strongly disagree/disagree, 8.10% (n = 10) respondents were neutral to the statement while 66.70% (n = 82) were strongly agree/agree level representing the majority of the respondents. On project overtime cost: 25.20% (n = 31) were strongly disagree/disagree 8.10% (n = 10) respondents were neutral to the statement while 66.70% (n = 82) were strongly agree/agree level representing the majority of the respondents. On waste rate of materials: 30.0% (n = 6) were strongly disagree/disagree, 4.90% (n = 6) respondents were neutral to the statement while 70.0% (n = 14) were strongly agree/agree level representing the majority of the respondents. To end with cost factors, on motivation cost: 24.40% (n = 30) were strongly disagree/disagree, 16.30% (n = 20) respondents were neutral to the statement while 59.30% (n = 73) were strongly agree/agree level representing the majority of the respondents.

Time Factors

The time factors affecting performance of GETFund results as shown on table 4.6 indicate that: availability of resources 14.60% (n = 18) were strongly disagree/disagree, 4.90% (n = 6) respondents were neutral to the statement while 80.50% (n = 99) were strongly agree/agree to the statement of availability of resources. On planned time for project cost: 20.30% (n = 25) were strongly disagree/disagree, 4.90% (n = 6) respondents were uncertain to the statement and majority of the respondents 74.80% (n = 92) were strongly agree/agree to the issue at hand. On time needed to defects: 25.20% (n = 31) were strongly disagree/disagree, 4.90% (n = 6) respondents were neutral to the statement while, 69.90% (n = 86) were strongly agree/agree. On average delay in payment: 9.80% (n = 12) were strongly disagree/disagree, 1.60% (n = 2) respondents were neutral to the statement while 88.60% (n = 109) were strongly agree/agree level representing the majority group of the respondents. To terminate with time factors, site preparation time: 30.10% (n = 37) were strongly disagree/disagree, 00% (n = 0) respondents were neutral to the statement while 69.90% (n = 86) were strongly agree/agree level representing the majority of the respondents.

Quality Factors

The quality factors affecting performance of GETFund results as shown on table 4.6 indicate that: conformance to specification 20.30% (n = 25) were strongly disagree/disagree, 4.9% (n = 6) respondents were undecided to the statement while 74.80% (n=92) were strongly agree/agree of the statement of conformance to specification. On quality of equipment and raw materials: 9.80% (n = 12) were strongly disagree/disagree, 0.0% (n = 0) respondents were neutral to the statement and majority of the respondents 90.20% (n = 111) were strongly agree/agree to the issue at hand. On availability of personnel: 9.80% (n = 12) were strongly disagree/disagree, 0.0% (n = 0) respondents were uncertain to the statement while, 90.20% (n = 111) were strongly agree/agree to the statement. To conclude with quality factors, quality training/meeting: 18.70% (n = 23) were strongly disagree/disagree, 2.40% (n = 3) respondents were neutral to the statement while 78.90% (n = 97) were strongly agree/agree level representing the majority of the respondents.

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Productivity Factors

The productivity factors affecting performance of GETFund results as shown on table 4.6 indicate that: management labor relationship 9.80% (n = 12) were strongly disagree/disagree, 0.80% (n = 1) respondents were neutral to the statement while 89.40% (n=110) were strongly agree/agree of the statement. On sequencing of work according to Schedule: 0.0% (n = 0) were strongly disagree/disagree, 4.90% (n = 6) respondents were uncertain to the statement and majority of the respondents 95.10% (n = 117) were strongly agree/agree to the issue at hand. On absenteeism rate through projects: 25.20% (n = 31) were strongly disagree/disagree, 9.80% (n = 12) respondents were undecided to the statement while, 65.0% (n = 80) were strongly agree/agree to the statement. On project complexity: 35.00% (n = 43) were strongly disagree/disagree, 0.0% (n = 0) respondents were neutral to the statement while 65.0% (n = 80) were strongly agree/agree level representing the majority group of the respondents. To end with productivity factors, on number of new project/year: 39.80% (n = 49) were strongly disagree/disagree to the statement, 3.30% (n = 4) respondents were undecided to the statement while 56.90% (n = 70) of the respondents strongly agree/agree.

Client Satisfaction Factors

The client satisfaction factors affecting performance of GETFund construction projects results as shown on table 4.6 indicate that: information coordination between Owner 4.90% (n = 6) were strongly disagree/disagree, 0.0% (n = 0) respondents were undecided to the statement while 95.10% (n=117) were strongly agree/agree of the statement. On number of dispute between owner: 14.60% (n = 18) were strongly disagree/disagree which represents minority of the respondents, 4.90% (n = 6) respondents were undecided to the statement while 80.50% (n = 99) were strongly agree/agree to the issue at hand. To end with client satisfaction factors, on number of dispute between owner: 20.30% (n = 25) were strongly disagree/disagree to the statement, 8.10% (n = 10) respondents were undecided to the statement while 71.50% (n = 88) were strongly agree/agree level representing the majority group of the respondents.

Innovation and Learning Factors

The innovation and learning factors affecting performance of GETFund results as shown on table 4.6 indicate that: learning from best practices 9.80% (n = 12) were strongly disagree/disagree, 0.0% (n = 0) respondents were undecided to the statement while 90.20% (n=111) were strongly agree/agree of the statement of learning from best practices. On training the human resources: 14.60% (n = 18) were strongly disagree/disagree, 1.60% (n = 2) respondents were undecided to the statement and majority of the respondents 83.70% (n = 103) were strongly agree/agree to the issue at hand. On learning from own experiences: 25.20% (n = 31) were strongly disagree/disagree, 4.90% (n = 6) respondents were undecided to the statement while, 69.90% (n = 86) were strongly agree/agree to the issue of learning from own experiences. On review of failures: 14.60% (n = 18) were strongly disagree/disagree, 0.0% (n = 0) respondents were undecided to the statement while 85.40% (n = 105) were strongly agree/agree level representing the majority group of the respondents.

Environmental Factors

The environmental factors affecting performance of GETFund results as shown on table 4.6 indicate that: on Climate condition on site: 20.30% (n = 25) were strongly disagree/disagree to the statement, 9.80% (n = 12) respondents were neutral to the statement while 69.90% (n = 18) were strongly agree/agree level representing the majority group of the respondents. On waste around the site: 50.40% (n = 62) were strongly disagree/disagree, 49.60% (n = 61) respondents were uncertain to the statement while 0.0% (n = 0) were strongly agree/agree level representing the majority of the respondents. To end with environmental factors, on noise level and air quality: 30.10% (n = 37) were strongly disagree/disagree, 4.90% (n = 6) respondents were undecided to the statement while 65.00% (n = 80) were strongly agree/agree level representing the majority of the respondents.

Overall, we appreciated that majority of the respondents 73.98% (n = 91) were in agreement that the factors confronting efficient GETFund construction projects execution in the region and minority of them 20.33% (n = 25) were in disagreement with the affecting factors. Again, the mean scores in the table 4.6 suggest that the most leading factors confronting efficient GETFund construction projects execution in the region are quality factors, cost factors and time factors with the highest mean score of (mean=2.7, 2.6, 2.6) with standard deviation of (0.7, 0.8, 0.8) respectively.

CONCLUSION AND RECOMMENDATIONS

- From the findings of the study, it can be concluded that, major challenges affecting the efficient execution of GETFund construction projects in Ghana is financial inadequacies, political interferences in the award of contract to deserving contractors, high interest rate, price fluctuations lack of qualified personnel's, inadequate equipment's, poor payments as important challenges affecting the execution of GETFund construction projects in the Upper West Region. It is recommended that; clients should ensure that there are available funds for a project before it is awarded in order to avoid prolonged delay in payment of certified certificates for work done by contractors and the accumulation of interest. The study recommends

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that, a new approach to contract award procedure be instituted by giving less weight to prices and more weight to the capacity, past performance and adherence of performance measurement of contractors bidding for the projects irrespective of their politically, culturally and religious persuasions. The study also recommends that, contractors making requisition of materials to project site should put into consideration the availability of storage facilities that will receive such materials before requisition, this will help to minimize deterioration of materials on site and pilfering.

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