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THE ROLE OF PROJECT MANAGEMENT IN TETFUND CONSTRUCTION PROJECTS

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Tertiary Education Trust fund (TETfund) is an intervention agency that provides funding for the rehabilitation, restoration and consolidation of tertiary education in Nigeria. Despite the engagement of project managers in TETfund projects, there is empirical evidence that most often these projects fail in terms of cost, time and quality. Regulatory bodies such as RICS, APM and IPM have clearly defined generic processes of project management practice throughout the project life cycle. This research aimed to identify the project management responsibilities performed by project managers involved in TETfund projects. A quantitative research approach was adopted in this work. A structured questionnaire was designed to elicit the participation of project managers in TETfund projects. Respondents were sampled using the purposive sampling technique. Data collected was analyzed using both descriptive and inferential statistic. Results from the research shows that Architects and Quantity surveyors often serve as project managers on TETfund projects. More so, 92.3% of the respondents were engaged at the inception of the project life cycle and often served leadership roles on these projects. Respondents reported that project management responsibilities were provided at all stages of the project life cycle which include preparation, procurement, design, construction and handover. More so, 50% of the respondents were highly satisfied with the services they offered on the project as they had the opportunity of providing challenging project management services that was much more than anticipated. Findings of this research provides an insight to the level of engagement and role of project management in TETfund projects. Also, it provides empirical evidence on the understanding of the concept of project management in the Nigerian construction industry.

Keywords: engagement, management, project, responsibilities, TETfund

INTRODUCTION

The Tertiary Education Trust Fund (TETfund) is one of the intervention agencies established with the responsibility of seeing to the survival of the tertiary education system in Nigeria. The mission of the body as spelt out is- To provide focused and transformative intervention in public tertiary institutions in Nigeria through funding and effective project management. As one of the focus of the TETfund,

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funds are usually set aside to assist institutions to execute most of their projects whether it is in the short-run or long-run. Funds from the TETfund are usually made available only to public tertiary institutions in Nigeria. More so, it was noted that the reason for its establishment was actually to assist public tertiary education programme. Therefore, it does not put into consideration the management of private tertiary institutions within the country (Adeleye, 2013). Although a new agency; its presence has been felt in virtually most of the Universities, Polytechnics and Colleges of Education in the country. The focus of this body is to ensure that the tertiary level of education in the country can compete favorably with other universities in the continent and around the world.

Despite the efforts of this agency, empirical evidence shows a large degree failure in performance of TETfund developmental projects (Sanusi et al., 2017). Several factors can undermine the performance of projects, such as complexity, weakness in organizational design and capabilities, optimism bias, strategic misinterpretation or even certain project characteristics, etc. (Garemo et al., 2015). However, in practically all cases, successful project management through the planning and design of construction processes for the purpose of controlling the time, cost, and quality of design and construction, improves project quality while helping to maintain project budget and scope (Kuprenas et al., 1999). This research aims to identify the project management responsibilities performed by project managers involved in TETfund projects.

LITERATURE REVIEW

Tetfund projects

TETfund came into existence in the year 2011 after it metamorphosed from the Education Trust Fund (ETF) which was established in 1993 (Ogunde et al., 2017). As an intervention agency, the institution has been responsible for ensuring that the objectives of the public tertiary institutions in the country are met through the provision of necessary resources. TETfund has been responsible for the distribution of intervention funds to the various public higher institutions in Nigeria. This includes the Universities, Polytechnics, Colleges of Education and other levels of education. Although the agency also takes responsibility for the funding of other lower levels of education within the country, however, their major task has been in the area of distributing and monitoring fund among tertiary institutions in the country (Ogunde et al., 2017).

The TETfund is an interventional measure of the Federal Government to tackle inadequate facilities in tertiary institutions. This is the major role which the agency has been playing over the years since it came into establishment in 2011. The educational sector all over the world plays a key role in providing the needed balance in the form of skilled manpower, inculcation of acceptable societal norm, developing techniques and methodologies that are required for the nation to thrive (Onyeike and Eseyin, 2014). Various government agencies such as the Central Bank of Nigeria (CBN) and the Federal Inland Revenue Services (FIRS) release funds to the TETfund as a channel for distributing same to the various tertiary institutions within the country.

TETfund through its activities has also seen to the management of other non-financial needs of the various levels of education in the country. The Tertiary Education Trust Fund (TETfund) has been intervening in the management of universities in Nigeria through a number of activities such as funding, staff training and development and projects facilitation.

Project success

Project success has been discussed for years in project-management literature revealing the sociopolitical criteria that govern project performance (Samset, 1998). The traditional view of project success is associated with fulfilling time, cost, and scope objectives. Financial criteria have been used to measure project performance, including economic return, cost-benefit analyses, and profit (De Carvalho and Rabechini, 2015). However, it is now acknowledged that social and environmental criteria are also important.

TETfund projects like other capital projects have been reported to fail mostly in terms of time, cost and quality specifications. Sanusi et al. (2017) amongst other literature, identified failure of construction projects in respective context. Most capital projects in Nigeria fail and are abandoned in different stages of their development, while most projects that were successfully delivered, perform poorly in delivering intended functional services (Amade et al., 2015).

Akintoye (2010) found evidence in their study that the major challenges to project successful delivery in the construction industry are: non commitment from project management team, lack of proper coordination by relevant stakeholders, lack of effective communication, lack of adequate techniques to measure project success and financial constraints etc. Thus, emphasizing the need to employ a formidable project team with the project manager as the team leader, who will work harmoniously in the interest of the client to achieve project success as proposed by Koushki, Al-Rashid and Kartam (2005).

Problem statement

TETfund projects like all other projects usually have both project inception and completion phases. According to Saidu & Shakantu (2016), project phases encompasses: project design, project planning, project construction and project completion and handing over phases. Empirical evidence proves that early engagement of project management techniques significantly improves project delivery success (Kuprenas et al., 1999). However, Assaf & Al-hejji (2006), submitted that challenges that might inhibit project delivery are not limited to inadequate planning and scheduling. More so, Yang & Peng (2008) puts forward that client's demand for a project to be delivered as scheduled, within stipulated time and required quality should be in line with contractual duties, obligations and responsibilities. Sanusi et al. (2017) conducted a research appraising the project management success of TETfund projects in Ahmadu Bello University, Zaria. The research reviewed a total number of twenty-eight (28) projects completed between the year 2009 – 2011. Sanusi et al. (2017) concluded that only 48% of the projects were successful with regards to time, cost and quality specifications. This begs the question on the degree of engagement and participation of project managers in TETfund projects.

METHODOLOGY

The focal study population of this work were Tertiary Education Trust Fund (TETfund) sponsored projects within the last ten years (2009 to 2019) in five institutions of higher learning in Kaduna state (Ahmadu Bello University, Kaduna State University, Nigerian Defense Academy, Kaduna Polytechnic and Federal College of Education). A quantitative research approach was adopted in this work. Considering the relatively small size of the population, there was no need to sample the population. A letter of introduction was addressed to the Desk officers of the concerned institutions in order to obtain data on such projects. However, after multiple attempts to get the required data, only three institutions (Ahmadu Bello University, Kaduna State University and Nigerian Defense Academy) responded in due time. Thus, these three institutions served as the population for the research. A total number of 101 projects were identified to fall within the frame of this work from the targeted institutions. A structured questionnaire with five (5) sections was designed to enquire the degree of engagement and participation of appointed project managers in the selected TETfund projects. The first and second sections inquired about personal data of the respondents and the project respectively. The third and fourth sections inquired about the stage at which the respondents were engaged on the project as well as their satisfaction with the responsibilities they performed. The final section appraised the overall understanding of the respondent on roles and responsibilities of other professionals on the project. The project managers as respondents were purposively sampled based on their participation on the projects. The next section details analysis of data collected using both descriptive and inferential analysis techniques.

RESULTS AND DISCUSSION

Response rate

A total of 30 questionnaires were distributed to identified respondents. The low number of respondents relative to the total number of identified projects is attributed to most of the respondents' participation in multiple TETfund projects within the specified time frame. More so, it was observed from the data that project managers were not engaged at all in most of the projects. A total of 26 questionnaires which represents 86.6% of the distributed were returned and used for analysis.

Demography of respondents

Table 1 shows the demography of the respondents. Professionally, a large percentage of the respondents were quantity surveyors with 53.8% and Architects with 38.5%. However, only 7.7% were builders while none of the respondents were structural nor M&E engineers. This can be attributed to the ability of architects and quantity surveyors to take up management responsibilities more than the other professions. With regards to professional status, majority of the respondents with 76.9% have member status in their respective professional bodies. Only a few with 15.4% and 7.7% have Associate and Fellow status respectively. More so, a share percentage of the respondents have a relative working experience, with about 42.3% having about 5 to 10 years of working experience, and 34.6% with 11 to 15 years of experience. This work also enquired about the number of projects the respondents participated in the specified time frame. Majority responded they

participated in 1 to 3 projects with 65.4% while the rest of the respondents participated in 4 to 8 of projects with 34.6%. More so, majority of the respondents do not have a certificate in project management with 57.7% while 42.3% have a certificate in project management.

Table 1: Demography of respondents

Core Profession	Frequency	Percentage (%)	Professional Status	Frequency	Percentage (%)
Architect	10	38.5	Probation	00	0
Builder	02	07.7	Member	20	76.9
QS	14	53.8	Associate	04	15.4
M&E	00	0	Fellow	02	07.7
Structures	00	0	Others	00	0
Other	00	0			
			Total	26	100
Total	26	100			
Years of Experience			Number of projects		
Less than 5	00	0	None	00	0
5-10	11	42.3	1-3	17	65.4
11-15	09	34.6	4-8	09	34.6
16-20	01	03.9	Above 8	00	0
Above 20	05	19.2			
			Total	26	100
Total	26	100			
Project management certificate					
Yes	11	42.3			
No	15	57.7			
Total	26	100			

The projects

The respondents were requested to pick a project of choice from the range of TETfund projects they participated in within the time frame of this work. This was done to ease the respondents in responding to the questions with clarity and precision. Table 2 shows the nature of projects in which the respondents participated in. A large percentage of the projects with 65.4% span between 1001 to 2000 meter squared in size, and also with total project duration of over 14 months as responded by 50% of the respondents. With regards to the number of upper floors constructed on the project, majority responded with constructing either two or three floors. More so, respondents were enquired about the total contract sum of the project, majority responded with been involved in a project worth between (200-350) million naira. This response represents 61.5% of the total responses. Construction of a multifunctional structure was the most consistent project as reported by the respondents with 57.7% of the total responses. However, only 3.9% of the respondents reported been involved in the construction of a library, while none was involved in constructing an auditorium in the specified time frame. Furthermore, only 7.7% of the projects were completed, 38.5% are still ongoing, while majority of the projects representing 46.1% are currently

suspended. This response is in line with the results presented by Sanusi et al. (2017), where only 48% of projects were completed within the stipulated time.

Table 2: The projects

Size (m^2)	Frequency	Percentage (%)	Duration (months)	Frequency	Percentage (%)
Less than 500	00	0	Less than 3	00	0
500 - 1000	07	26.9	3 – 6	00	0
1001 – 2000	17	65.4	7 – 10	06	23.1
2001 – 3000	02	7.7	11 – 14	07	26.9
Over 3000	00	0	Over 14	13	50
Total	26	100	Total	26	100
Sum (Nm)			No of Upper Floors		
Less than 200	08	30.8	None		
200 – 350	16	61.5	1	01	3.9
351 – 500	02	7.7	2	11	42.3
501 - 650	00	0	3	11	42.3
Over 650	00	0	Over 3	03	11.5
Total	26	100	Total	26	100
Type of Building			Project Status		
Class	02	7.7	On-going	10	38.5
Office	03	11.5	Completed	02	7.7
Theater	03	11.5	Suspended	12	46.1
Laboratory	02	7.7	Abandoned	02	7.7
Library	01	3.9			
Auditorium	00	0	Total	26	100
Multifunction	15	57.7			
Total	26	100			

Project management services

This section enquired about the project management (PM) services rendered by the respondents in their respective projects. About 92.3% of the respondents reported been engaged at the inception stage of the project while the 7.7% reported been engaged at the procurement stage. The respondents were enquired about the role they felt they provided on the project, majority of the respondents with 80.8% felt they served as leaders of the project team. A fair share of them felt they served as managers while only 7.7 served a facilitating role on the project.

With regards to availability of a formal document that spelt out the project management duties and responsibilities required of them for their respective projects, a large percentage of the respondents representing 80.9% responded negatively as they are not aware of any such document. However, 11.5% were not sure if there was such document or not, while 7.6% responded positively although not all were aware of the details of the document. Ultimately, with regards to overall satisfaction with the project management services provided by the respondents on their respective projects, 50% and 38.5% responded positively as they had opportunities of providing challenging project management services and were appreciated by the project team. However, 7.7% felt they were only able to provide some PM services and were not allowed to provide some that would have

improved the project performance. Only 3.8% responded negatively as they were not allowed to provide most of the basic PM services they were prepared to offer.

Table 3: Project management services

Stage of Engagement	Frequency	Percentage (%)	Role Provided	Frequency	Percentage (%)
Inception	24	92.3	Leadership	21	80.8
Feasibility	00	0	Facilitator	02	7.7
Procurement	02	7.7	Management	03	11.5
Design	00	0			
			Total	26	100
Total	26	100			
Degree of satisfaction			Availability of PM document		
Highly satisfied	13	50	Not sure	03	11.5
Satisfied	10	38.5	No	21	80.9
Somewhat satisfied	02	7.7	Yes (No details)	01	3.8
Somewhat dissatisfied	00	00	Yes (Not detailed)	00	0
Dissatisfied	01	3.8	Yes (detailed)	01	3.8
Highly Satisfied	00				
			Total	26	100
Total	26	100			

Project management responsibilities

According to RICS (2011), project management responsibilities are classified based on different phases of the project life cycle. These include preparation responsibilities, procurement responsibilities, design responsibilities, construction responsibilities, occupation/handover responsibilities as well as generic responsibilities. Respondents were presented with these identified responsibilities of project managers and were requested to rate at which they provided such responsibilities on their respective projects. A Likert scale of 1-6 was used where 1-3 represents "not provided for respective reasons (not within the scope of engagement, outside the scope of the project and non-availability of required skill staff)". The range 4-6 however represents "provided to respective degrees (within the scope of engagement, not within the scope of engagement but requested by client and not required but provided due to significance)". Table 3 shows the ranking of PM responsibilities based on the ratings of respondents using the respective mean average and standard deviation.

From Table 4, "Establish management structure for design stage" ranked 1st as the most provided PM responsibility with a mean value of 4.9, while "issue instructions to project participants as required" and "monitor and report performance of the project team" ranked 2nd and 3rd with mean values of 4.8 respectively. This average ratings of respondents shows that project managers in TETfund projects mostly serve PM responsibilities only when it is within the scope of engagement or requested by the client. More so, "Co-ordinate the preparation of feasibility studies" and "Develop and manage the project brief" ranked 15th and 16th with mean values of 3.6 and 3.5 respectively. This shows that non availability of required skilled staff is a barrier to providing extensive PM responsibilities in TETfund projects. However, "Establish a structure and procedure for meetings" ranked least

on the table with a mean of 2.8 and standard deviation of 1.423. This according to the respondents is because the responsibility is outside the scope of the project or they lack the required skilled staff to provide the service.

Table 4: Project management responsibilities provided

Project Management Responsibilities	Mean	Std. Dev	Rank
Establish management structure for design stage	4.9	1.625	1
Issue instructions to project participants as required	4.8	0.948	2
Monitor and report performance of the project team	4.8	1.038	3
Agree approvals required from the professional team	4.4	0.885	4
Prepare and maintain a defects administration plan	4.4	1.273	5
Undertake regular site inspections	4.3	0.829	6
Convene and chair principal project meetings	4.1	0.266	7
Prepare project preconstruction reports for client	4.1	0.997	8
Advise and recommend on procurement options	4.0	0.649	9
Establish and implement project reporting procedures	4.0	1.038	10
Prepare and maintain a project execution plan	4.0	1.344	11
Establish project design roles and responsibilities	3.9	0.577	12
Prepare project design reports for client use	3.9	1.328	13
Prepare and maintain a risk management plan	3.9	1.948	14
Co-ordinate the preparation of feasibility studies	3.6	0.880	15
Develop and manage the project brief	3.5	1.278	16
Facilitate parties agreement to the final account	3.4	0.885	17
Obtain authorization for additional project costs	3.4	1.044	18
Advise client on site surveys and investigations	3.1	1.238	19
Advise on liquidated and ascertained damages	3.1	1.752	20
Establish a structure and procedure for meetings	2.8	1.423	21

Project-related responsibilities

A list of responsibilities was further presented to the respondents enquiring about their perception as to which professional is best suited to carry out the respective responsibility. Figure 1 shows a large share of the respondents reported the responsibilities such as "Prepare and maintain a handover plan", "Identify long delivery building components" and "Visit site, carry out initial inspections and advise client" are best suited to be carried out by the Architect. However, responsibilities such as "Confirm the scope of the contract to the client" and "Prepare and maintain the project schedules" were found to be best suited for the project manager. Responsibilities such as "Prepare tender report and make recommendations", "Make recommendation for payment to the Client" and "Manage project cash flows and monitor expenditure" are majorly to be carried out by the Quantity Surveyor.

However, the respondents perceived some of the listed responsibilities could be carried out by multiple professionals. These responsibilities include "Agree all test certificates and approvals for the project" and "Manage the engagement of the professional team" which could be a shared responsibility between the Architect and the project manager. However, responsibilities such as "Prepare regular quality, progress and cost reports "and "Facilitate and manage contract

documentation" could be shared by the Project Manager and the Quantity Surveyor.

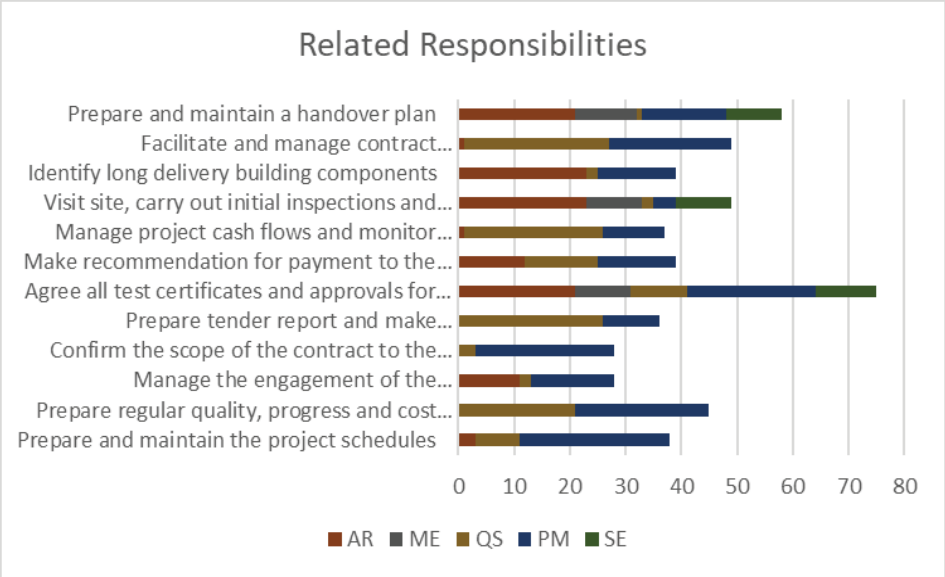

Fig 1: Related responsibilities

CONCLUSION

The research has appraised the project management roles in TETfund construction projects using a case study of institutions of higher learning in Kaduna state. Results from the research shows that Architects and Quantity surveyors often serve as project managers in TETfund projects. This could be attributed to their ability to manage resources on projects. The study further found that these professionals were engaged at the inception stage of the project life cycle and often serve leadership roles on these projects. Also, establishing management structure for design stage and also issuing instructions to project participants as required were found to be the top responsibilities performed by the project managers.

Previous literature has reported cases of conflict of roles and misunderstandings between professionals on such TETfund projects which often leads to project failure. This study provided an insight to this problem as it found that there is a lack of a formal document stating the roles of project managers with respect to other professional roles on such projects which limits the contributions of project managers . It was also found that project managers in TETfund projects mostly serve project management responsibilities only when it is within the scope of engagement or requested by the client.

Ultimately, majority of respondents were highly satisfied with the services they offered on the projects as they had the opportunity of providing challenging project management services that was much more than anticipated. Respondents reported providing project management responsibilities in all stages of the project life cycle which include preparation, procurement, design, construction and handover. It is recommended that project managers should be engaged more in TETfund projects in order to improve success of such projects. furthermore, there is a need to provide a document which specifies the respective roles of

professionals on such projects with a view to mitigating conflict of roles amongst professionals.

REFERENCES

Adeleye, S. (2013) 'Government Should Not Politicize Education', DailyIndependentng.com, 17 April. Available at: http://dailyindependentnig.com/2013/04/government-should-not-politicise-education-afolabi/Adesulu.

Amade, B. et al. (2015) 'Critical Success Factors for Public Sector Construction Project Delivery : A Case of Owerri , Imo State', International Journal of Research in Management, Science and Technology, 3(1), pp. 11–21.

Assaf, S. A. and Al-hejji, S. (2006) 'Causes of Delay in Large Construction Projects', international journal of, 24, pp. 349–357.

De Carvalho, M. M. and Rabechini, J. R. (2015) 'Impact of risk management on project performance: The importance of soft skills', International Journal of Production Research. Taylor & Francis, 53(2), pp. 321–340.

Garemo, N., Matzinger, S. and Palter, R. (2015) Megaprojects : The good , the bad , and the better.

Koushki, P. A., Al-Rashid, K. and Kartam, N. (2005) 'Delays and cost increases in the construction of private residential projects in Kuwait', Construction Management and Economics, 23(3), pp. 285–294. doi: 10.1080/0144619042000326710.

Kuprenas, J. A., Madjidi, F. and Smith, B. M. (1999) 'Implementation of Project Management in Public Engineering Organization', Journal of Construction Engineering and Management, 15(3), pp. 69–77.

Ogunde, A. et al. (2017) 'Challenges confronting construction project management system for sustainable construction in developing countries: Professionals perspectives (a case study of Nigeria)', Journal of Building Performance, 8(1), pp. 1–11.

Onyeike, V. C. and Eseyin, E. O. (2014) 'Tertiary Education Trust Fund (TETFUND) and the Management of University Education in Nigeria', Global Journal of Education Research, 13, pp. 63–72.

RICS (2011) RICS Practice Standards, UK: Accelaration. 1st Editio. UK: Royal Institute of Chartered Surveyors.

Saidu, I. and Shakantu, W. (2016) 'The contributions of construction material waste to project cost overruns in Abuja , Nigeria', Acta Structilia, 23(1), pp. 99–113.

Samset, K. (1998) Project management in a high-uncertainty situation, Norwegian University of Science and Technology. Norwegian University of Science and Technology.

Sanusi, G. et al. (2017) 'Exploring Tertiary Education Trust Fund Projects Success Delivery in the Ahmadu Bello University, Zaria- Nigeria from Stakeholders Perspectives', in Built Environment Conference. Durban, South africa, pp. 27–36.

Yang, J. and Peng, S. (2008) 'Development of a Customer Satisfaction Evaluation Model for Construction Project Management', Building and Environment, 43, pp. 458–468.