

COMPARATIVE EVALUATION OF CONSTRUCTION MANAGERS INVOLVEMENT IN SMALL AND LARGE BUILDING PROJECTS

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ABSTRACT

The level of construction managers' involvement in carrying out their roles influence the outcome of a building project. However; previous studies have not adequately explored the extent to which construction managers' involvement varies across projects of different sizes. The aim of the study is to evaluate the extent of construction managers' involvement in executing their roles across different phases of small and large-scale building projects. Quantitative research method was adopted to qualify respondents' views using close-ended questionnaires. The population consists of project managers, human resource managers and construction managers, from the 85 construction firms across the six area councils of Abuja. A sample size of 50 was determined using Cochran's equation. The questionnaire items were measured on a 5-point Likert Scale. Data collected was analysed by computing the mean item score (MIS) and ranked based on the mean item score obtained. The findings indicate that the extent of construction managers involvement across the phases of small-scale building projects has limited engagement (MIS = 3.4) to high (MIS = 3.5). While in large scale building projects, their involvement is significantly higher (MIS = 4.0 to 4.2). The study concludes that the extent of construction managers involvement in small scale building project is moderate compared with the high extent in large scale building projects. The study recommends that construction organisations should develop training that focus on the challenges and requirements peculiar to building projects of different sizes, and enlighten construction managers on the expectations associated with building projects of different sizes.

KEYWORDS: Building Projects, Construction Managers, Involvement, Large-scale, Small-scale

INTRODUCTION

The construction industry is faced with so many challenges among which is inability of construction managers effectively carry out their roles (Ogunsanmi, 2016; Eja & Ramegowda, 2020 and Ravi, John, Mohammed. Hashem, 2022). According to Kang, Jin, Hyun & Park (2018), the level of construction managers' involvement in carrying out their roles influence the outcome of a building project. Construction managers' involvement in a building project is vital such that their absence results in lack of conformity

with specified standards. When building project is larger, the requirements of the construction manager increases in such cases, a builder is required to assist the construction manager (Anyanwu, 2013).

In the construction of buildings, contracting methods such as design-and-build, construction managements, guaranteed maximum price and management contracts allows for construction managers to be involved at the early stage of a building project (Greg, 2018). Construction managers are site based managers of construction organisations with professional training in the management,

production and delivery of Building projects in accordance to the objectives (Chartered Institute of Building CIOB, 2013). According to Zidane (2012), as projects vary in sizes, so do construction managers' involvement in carrying out their roles effectively.

Previous research, as highlighted in Onyia (2019), indicates that the effectiveness of construction managers can be improved through skill development. This finding is consistent with Kang, Jin, Hyun, and Park, (2018), who demonstrated that skills affect the level of involvement of construction managers in executing their roles, ultimately impacting the results of building projects. Nevertheless, these studies have not adequately explored the extent to which construction managers' involvement varies across projects of different sizes. The aim of the study is to evaluate the extent of construction managers' involvement in executing their roles across different phases of small and large-scale building projects, and to identify how this involvement is influenced by project size. This was achieved through the following objectives; To analyze the roles and responsibilities of construction managers in small large-scale building projects, and to quantify the level of involvement of construction managers in various project phases, including planning, execution, monitoring, and completion, for both small and large projects.

The findings of the study will serve as management guidelines for construction organisations to focus their trainings and development on programs that enhance managerial effectiveness based on project size. To identify how construction managers ' involvement

levels differ based on project scale. Furthermore, it can contribute to the existing literature by filling a gap in knowledge regarding the relationship between project size and managerial involvement.

LITERATURE REVIEW

The Construction Manager

According to the Chartered Institute of Building CIOB (2013) construction managers are site based managers of construction organisations with professional training in the management, production and delivery of Building projects in accordance to the objectives. A project manager as described in PMBOK (2013), is a professional assigned by a performing organization to lead a project team to achieve project objectives. Furthermore, in the construction of buildings, contracting methods such as design-and-build, construction managements, guaranteed maximum price and management contracts allows for construction managers to be involved at the early stage of a building project (Greg, 2018).

The Roles of Construction Managers

Construction manager plays an important role in the leadership of a project team necessary in achieving the project's objectives. Construction manager plays a key role throughout the project life cycle from its initiation phase through closing phase (Project Management Body of Knowledge PMBOK, 2013). According to Shibani & Sukumar (2015), a construction project manager has the responsibility of the planning, execution and closing of a project as their roles influence the project. Furthermore, construction project manager communicates with the upper management level, client and external vendors, whose roles are the ability to hire, fire, supervise,

planning, setting goals, timely delivery, cost within budget, the dispute resolution, and risk management.

Classification of Building Projects and Influence of Project Scale

In the construction sector classifying construction projects is vital for structuring information such as project size classification. In managing construction works, knowing the project size is vital for the estimation and planning for each task of

a project. Project classification helps to organize and define the various aspects of a project to enables managing of different types of projects (Josey & England, 2009). The sizing matrix for projects is classified as mega, large, medium and small-scale projects (Josey & England, 2009). However, Collins, Parrish and Gibson Jr (2017), classified the sizing matrix for projects within the context of building construction, as small- and large-scale construction projects

Table 1: Differences between small- and large-scale building projects

S/n	Small building project	Large building project
1	Less Cost < \$100,000 (₦80 million) as at 26/12/2022	High Cost > \$100,000 (above ₦80 million) as at 26/12/2022
2	General liability insurance (low financial risk)< \$1,200 (960,000)	General liability Insurance (financial risk) ≥ \$1,200 (₦960,000) per annum
3	Duration < 6 months	Duration > 6 months
4	Less Participants < 10 team members	More Participants > 10 team members
5	End users < 25 persons	End users > 25 persons

(Burgan and Burgan, 2014; Collins, Parrish & Gibson, 2017; Glover, 2021).

METHODOLOGY

The research method adopted for this study was quantitative approach because, it enabled quantify or measure the perceptions of the respondent as numerical data. Having identified information from existing literature, it was presented to the respondents through a structured questionnaire (Onyia, 2019). The study was conducted across the six area councils of Abuja because being the capital city of Nigeria; Abuja hosts numerous construction firms who are engaged with so many construction projects of various sizes. This make construction managers to be actively involved in the construction of buildings. Record obtained from the Federal Inland revenue Service has shown that 85 construction firms paid their taxes in the year. The 85 construction firms included both civil and building construction firms and are small, medium or large construction firms (Technical Tax Office, Federal Inland Revenue Service Abuja, 2022). The population consists of project managers, human resource

managers and construction managers. They were the respondents of the 85 construction firms from across the six area councils of Abuja. A sample size of 50 was determined using Cochran's equation (1963-1975). Cochran equation was adopted for the study because it suitably addressed the small population of the construction firms. Purposive sampling was used in the study because it is suitable in qualitative research as it is mostly appropriate for small sample sizes where individuals who have the specific characteristics or knowledge(project managers and construction managers) needed to address the research question deliberately selected. A structured questionnaire designed with closed ended questions was used for collection of primary data. The data analysis adopted was descriptive statistics (measure of central tendency), where a cumulative mean score was computed. A cumulative mean score of 3.5 represents the standard decision mean which indicates positive response or high extent on the question, if

otherwise; it indicates a negative response moderate or low extent on the question. Hence, the following ratings are interpreted as: 0 - 1.49 indicates very low extent, 1.5 - 2.49 indicates low extent, 2.5 - 3.49 indicates moderate extent, 3.5 - 4.49 indicates high extent, 4.5 and above

indicates very high extent (Onuoha and Ibe, 2020).

RESULTS

This shows the extent of Construction Managers involvement in carrying out the roles across the various phases of small- and large-scale building projects.

Table 2: Construction managers involvement in small building projects

	Construction Managers' Roles	Very low	Low	Moderate	High	Very high	Fx	Mean	Rank
Initiation Phase									
1	Tendering processes	0	20	27	28	105	180	3.8	2 nd
2	Conducting feasibility study	3	12	45	68	30	158	3.4	3 rd
3	Project goals & objectives	2	28	30	60	30	150	3.2	4 th
4	Schedule of work rate	2	34	60	20	10	126	2.7	5 th
5	Statutory requirements & approvals	6	10	21	20	130	187	3.9	1 st
6	Schedule of payment	6	10	30	20	115	181	3.8	2 nd
7	Contract conditions	3	6	36	24	115	184	3.9	1 st
Cumulative mean								3.5	
Planning Phase									
8	Project cost planning	4	6	30	36	75	151	3.2	7 th
9	Work Breakdown Structure	6	40	27	36	15	124	2.6	8 th
10	Project Quality planning	0	18	27	60	70	175	3.7	2 nd
11	Scheduling	3	12	18	68	75	176	3.7	2 nd
12	Statement of work	5	2	30	80	55	172	3.6	3 rd
13	Draft Master Schedule	3	12	60	48	45	162	3.5	4 th
14	Project Risk planning	0	14	60	44	45	163	3.4	5 th
15	Task responsibility matrix	3	6	60	68	20	157	3.3	6 th
16	Project Logic Evaluation	0	12	30	80	55	177	3.8	1 st
Cumulative mean								3.4	
Execution Phase									
17	Site take over	0	20	60	44	30	154	3.3	4 th
18	Coordinating construction work	3	10	30	80	45	168	3.5	2 nd
19	Management of construction	0	18	60	36	45	159	3.4	3 rd
20	Cash flow management	5	20	18	72	40	155	3.9	1 st
21	Coordinating meetings & progress report	2	20	57	24	50	153	3.3	4 th
22	Conflict management	3	6	60	48	45	162	3.5	2 nd
23	Materials supply	0	18	48	64	30	160	3.4	3 rd
24	valuation	0	4	90	40	25	159	3.4	3 rd
25	Communication management	0	10	60	40	75	185	3.9	1 st
Cumulative mean								3.5	
Monitoring/ controlling phase									
26	Tracking milestone deliverables	0	20	60	48	25	153	3.3	3 rd
27	Checking projects goals & objectives	0	0	30	126	40	196	4.2	1 st
28	Checking project time	0	20	72	40	15	147	3.1	5 th
29	Checking project cost	0	10	36	80	25	151	3.2	4 th
30	Maintaining project scope	2	14	60	48	30	154	3.3	3 rd
31	Project quality assessment	0	18	66	48	20	152	3.2	4 th
32	Project risk assessment	3	6	60	48	45	162	3.5	2 nd
33	Taking corrective measures	3	30	21	60	35	149	3.2	4 th
Cumulative mean								3.4	
Project closure phase									
34	Organising project closure meeting	0	18	30	84	35	167	3.6	1 st
35	Providing project closure report	3	30	36	48	25	142	3.0	5 th
36	Processing payments	0	24	36	48	55	163	3.5	2 nd
37	Processing Contractors' Claims	3	16	54	44	50	167	3.6	1 st
38	Processing payment certificates	6	6	30	60	50	152	3.2	4 th
39	Carrying out project satisfaction survey	0	24	36	80	15	155	3.3	3 rd
40	Submission of maintenance manuals	0	10	63	40	55	168	3.6	1 st
Cumulative mean								3.4	

Table 2 shows that at initiation phase, Construction Managers' involvement in meeting 'contract conditions' was high. Meeting 'statutory requirements & approvals' were high, and their involvement in meeting 'schedule of payment' was high with mean scores of 3.9, 3.8 and 3.9 respectively. Similarly, in 'tendering processes', it was high with a mean score of 3.8 (ranked 1st and 2nd). 'Conducting feasibility studies' was moderate (not much involved) with mean score of 3.4 (ranked 3rd). Similarly, 'establishing project goals & objectives' were equally moderate (not much involved) with mean score of 3.2 (ranked 4th). Furthermore, producing 'schedule of work rate' had limited engagement with mean score of 2.7 (ranked 5th). This indicates that the extent of Construction Managers' involvement in carrying out the roles at the initiation phase of small scale building projects was high with a cumulative mean score of 3.5.

At the planning phase, producing 'project logic evaluation' was high with mean score of 3.8 (ranked 1st). Also, producing 'project quality plan' was high. Likewise, 'scheduling' was high with mean scores of 3.7 and 3.7 (ranked 2nd) respectively. Furthermore, 'creating statement of work' was high, and producing 'draft master schedule' was also high with mean scores of 3.6, and 3.5 (ranked 3rd and 4th) respectively. Producing 'project risk plan' was moderate with mean score of 3.4 (ranked 5th). Furthermore, producing 'task responsibility matrix,' 'project cost plan' and 'work breakdown structure' were limited with mean score of 3.3, 3.2 and 2.6 (ranked 6th, 7th and 8th) respectively. This indicates that the extent of Construction Managers involvement in carrying out the roles at the planning phase of small scale building projects has limited engagement with a cumulative mean score of 3.4.

At execution phase, 'cash flow management' was high. Likewise, in

'communication management' was equally high with mean scores of 3.9 and 3.9 (ranked 1st) respectively. Also, 'coordinating project roles' was high and 'conflict management' were high with mean scores of 3.5 and 3.5 (ranked 2nd) respectively, while 'management of construction,' 'materials supply' and 'valuation' were less with mean scores of 3.4, 3.4 and 3.4 (ranked 3rd) respectively. Similarly, 'site take over' was limited, and 'conducting meetings and progress reports' were equally limited with mean scores of 3.3 and 3.3 (4th) respectively. This indicates that the extent of Construction Managers' involvement in carrying out the roles at the execution phase of small-scale building projects was high with a cumulative mean score of 3.5.

At monitoring/ control phase, 'checking project goals & objectives' and 'project risk assessment' were high with mean score of 4.2 and 3.5 (1st and 2nd) respectively. While 'tracking milestone deliverables' was less. 'Checking project cost' had limited engagement, and 'checking project time' also had limited engagement with mean scores of 3.3, 3.2 and 3.1 (ranked 3rd, 4th and 5th) respectively. Similarly, 'maintaining project scope,' 'project quality assessment' and 'taking corrective measures' were limited with mean score of 3.3, 3.2 and 3.2 (ranked 3rd and 4th) respectively. This indicates that the extent of Construction Managers' involvement in carrying out the roles at monitoring/ control phase of small-scale building projects has limited engagement with a cumulative mean score of 3.4.

At closing phase, 'organizing project closure meetings' was high, likewise, 'processing contractor's claims' was high, and 'submission of maintenance manuals' was high with mean scores of 3.6, 3.6 and 3.6 (ranked 1st) respectively. Similarly, 'processing payment' was high with mean score of 3.5, while 'carrying out project satisfaction survey' had limited

engagement. ‘Processing payment certificates’ was also less, and ‘providing project closure report’ was limited with mean scores of 3.3, 3.2 and 3.0 (ranked 2nd, 3rd, 4th and 5th) respectively. This indicates

that the extent of Construction Managers’ involvement in performing the roles at the closing phase of small-scale building projects had limited engagement with a cumulative mean score of 3.4.

Table 3: Construction managers involvement in large building projects

	Construction Managers’ Roles	Very low	low	Moderate	high	Very high	Fx	Mean	Rank
Initiation Phase									
1	Tendering processes	0	6	27	72	85	190	4.0	4 th
2	conducting feasibility study	0	0	27	36	145	208	4.4	2 nd
3	Project goals & objectives	0	0	15	88	100	203	4.3	3 rd
4	Schedule of work rate	0	2	18	80	100	182	3.9	5 th
5	Statutory requirements & approvals	0	6	36	80	60	182	3.9	5 th
6	Schedule of payments	0	0	9	48	160	217	4.6	1 st
7	Contract conditions	0	24	36	48	65	173	3.7	6 th
Cumulative mean								4.2	
Planning Phase									
8	Project cost planning	0	0	18	44	150	212	4.5	1 st
9	Work Breakdown Structure	0	12	30	104	35	181	3.9	5 th
10	Project quality planning	0	0	30	108	50	188	4.0	4 th
11	Scheduling	0	0	24	96	75	195	4.2	2 nd
12	Statement of work	3	6	9	60	115	193	4.1	3 rd
13	Draft Master Schedule	0	0	27	36	130	193	4.1	3 rd
14	Project Risk planning	0	6	27	128	15	188	4.0	4 th
15	Task responsibility matrix	0	0	27	128	30	185	3.9	5 th
16	Project Logic Evaluation	3	6	9	96	70	184	3.9	5 th
Cumulative mean								4.1	
Execution Phase									
17	Site take over	0	0	57	72	50	179	3.8	6 th
18	Coordinating construction work	0	12	30	60	80	182	3.9	5 th
19	Management of construction	0	6	30	48	110	194	4.1	4 th
20	Cash flow management	0	0	33	40	130	203	4.3	2 nd
21	Coordinating meetings & progress reports	0	4	21	52	125	202	4.3	2 nd
22	Conflict management	0	6	60	48	60	174	3.7	7 th
23	Materials supply	0	0	0	116	90	206	4.4	1 st
24	Valuation	0	0	30	48	125	203	4.3	2 nd
25	Communication management	0	0	18	104	75	197	4.2	3 rd
Cumulative mean								4.1	
Monitoring/ controlling phase									
26	Tracking milestone deliverables	0	6	24	56	60	146	3.1	7 th
27	Checking project goals & objectives	0	0	30	44	130	204	4.3	2 nd
28	Checking project time	0	0	33	104	50	187	4.0	5 th
29	Checking project cost	0	0	18	120	55	193	4.1	4 th
30	Maintaining project scope	0	6	27	48	115	196	4.2	3 rd
31	Project quality assessment	0	10	21	80	75	186	3.9	6 th
32	Project risk assessment	0	12	27	60	85	184	3.9	6 th
33	Taking corrective measures	0	0	15	40	160	215	4.6	1 st
Cumulative mean								4.0	
Project closure phase									
34	Organise project closure meeting	0	6	24	56	60	146	3.1	6 th
45	Providing project closure report	0	10	30	88	50	178	3.8	5 th
36	Processing payments	0	4	39	88	50	181	3.9	4 th
37	Processing Contractor’s Claims	0	0	27	76	95	198	4.2	3 rd
38	Processing payment certificates	0	0	30	48	125	203	4.3	2 nd
30	Carrying out project satisfaction survey	0	0	15	100	85	200	4.3	2 nd
40	Submission of maintenance manuals	0	0	18	48	145	211	4.5	1 st
Cumulative mean								4.0	

Table 3 shows that at initiation phase, preparing 'schedule of payment' was very high with mean score of 4.6 (ranked 1st). 'Conducting feasibility studies' was also high. Furthermore, in preparing 'project goals & objectives', and in tendering process were high and the extent of preparing 'schedule of work rate' were high with mean scores of 4.4, 4.3, 4.0 and 3.9 (ranked 2nd, 3rd, 4th and 5th) respectively. Similarly, in meeting 'statutory requirements & approvals' and in meeting 'contract conditions', were high with mean scores of 3.9 and 3.7 (ranked 5th and 6th) respectively. This indicates that the extent of Construction Managers' involvement in carrying out roles at the initiation phase of large-scale building projects was high with a cumulative mean score of 4.2.

At planning phase, 'project cost planning' was very high with mean scores of 4.5 (ranked 1st). 'Scheduling' was high with mean score of 4.2 (ranked 2nd). 'Creating statement of work,' was high. Similarly, 'creating draft master schedule' was high, and 'project quality planning' was high with mean scores of 4.1, 4.1 and 4.0 (ranked 3rd and 4th) respectively. 'Creating project risk plan' was high. 'Task responsibility matrix' was also high. Furthermore, 'project logic evaluation' was equally high. Their involvement in preparing 'work breakdown structure' was high with mean scores of 4.0, 3.9, 3.9 and 3.9 (ranked 4th and 5th) respectively. This indicates that the extent of Construction Managers' involvement in carrying out the roles at planning phase of large-scale building projects was high with a cumulative mean score of 4.1.

At execution phase, 'materials supply' was high, and 'valuation' was high with mean scores of 4.4 and 4.3 (ranked 1st and 2nd) respectively. 'Cash flow management' was high with mean score of 4.3. Similarly, 'coordinating meetings & progress reports' was high with a mean score of 4.3. Furthermore, 'communication management' was high and 'management

of construction' was equally high with mean scores of 4.2, 4.1 and 3.9 (ranked 2nd, 3rd, 4th, and 5th) respectively. 'Site take over' was high, and 'conflict management' was high with mean scores of 3.8 and 3.7 (ranked 6th and 7th) respectively. This indicates that the extent of Construction Managers' involvement in carrying out the roles at the execution phase of large-scale building projects was found to be high with a cumulative mean score of 4.1.

At monitoring/ Control phase, 'taking corrective measures' was very high with a mean score of 4.6 (ranked 1st). 'Checking project goals & objectives' were high, 'project risk assessment' and 'checking project time' was high. Similarly, 'checking project cost' was high with mean scores of 4.3, 4.2, 4.1 and 4.0 (ranked 2nd, 3rd, 4th and 5th) respectively. Furthermore, 'managing project scope,' and 'project quality assessment' and were high with mean scores of 3.9 and 3.9 (ranked 6th) respectively. This indicates that the extent of Construction Managers' involvement in carrying out the roles at monitoring/control phase of large-scale building projects was high with a cumulative mean score of 4.0.

At the closing phase, 'submission of maintenance manuals' was very high with a mean score of 4.5 (ranked 1st). 'Processing payment certificate' was high, and 'project satisfaction survey' was equally high with mean scores of 4.3 and 4.3 (ranked 2nd) respectively. Furthermore, 'processing contractor's claims' was high, likewise, 'processing payment' was also high, and 'providing project closure report' was equally high with mean scores of 4.2, 3.9 and 3.8 (ranked 3rd, 4th and 5th) respectively. Their involvement in 'organizing project closure meeting' was moderate (not much involved) with mean score of 3.1 (ranked 6th). This indicates that the extent of Construction Managers' involvement in carrying out roles at the closing phase of large-scale building projects was found to be high with a cumulative mean score of 4.0.

DISCUSSION

From the results obtained, 18 roles involved in by construction managers were high, while 22 roles were moderate. This indicates that the extent of construction managers' involvement in carrying out the roles in small scale building projects has limited engagement. This is in line with the assertions by Zidane (2012) and Collins et al (2017), which states that as construction projects vary in size so are Construction Managers involvement and skills required. This indicates that Construction Managers play a significant role in the overall management of projects, reflected by a high cumulative mean score of 3.5. However, their involvement specifically in the planning, execution, monitoring, and closing phases of small-scale building projects is described as moderate, with each of these phases receiving a cumulative mean score of 3.4. This suggests that while Construction Managers are actively engaged in their roles, their level of involvement in these specific phases is somewhat limited or not as pronounced. Overall, the scores indicate that there is room for increased participation by Construction Managers during these critical stages of small-scale building projects. For large scale building projects, the results obtained showed that three (3) items out of the forty (40) items were very high. Thirty-five (35) items were high, while Two (2) items were moderate. This indicates that the extent of construction managers'

involvement in large scale building projects is very high. This is also in line with the study by Collins et al (2017) which states that as construction projects vary in size so are Construction Managers involvement and skills required. This indicates that Construction Managers have a high level of involvement in the various phases of large-scale building projects. The cumulative mean scores for the initiation, planning, execution, monitoring, and closing phases are relatively high, ranging from 4.0 to 4.2. This suggests that Construction Managers are significantly engaged in these stages, with their involvement being notably greater than in small-scale building projects, where their scores were moderate (around 3.4).

This means that as project scale increases, the role and involvement of Construction Managers also strengthen, indicating their crucial contribution to the success of large-scale projects compared to smaller ones. These findings agree with the study by Josey & England (2009); Anyanwu, (2013); Collins, Parrish, and Gibson Jr (2017), which assert that the size of a project determines the degree to which project management roles are carried out. Furthermore, it aligns with the study by Ogunsanmi (2016) which asserts that construction managers' involvement and required skill sets vary between small and large-scale projects.

Table 4: Construction managers' involvement in building projects

Project Phases	Small Scale Building Projects	Large Scale Building Projects
Initiation	High	High
Planning	Moderate	High
Execution	High	High
Monitoring	Moderate	High
Closing	Moderate	High

CONCLUSION AND RECOMMENDATIONS

Conclusion

In conclusion, Construction Managers have a limited level of involvement across all phases, of small-scale building projects with cumulative mean scores of 3.4. This suggests that while they are engaged, their participation may not be impactful. Conversely, in large-scale projects, their involvement is significantly higher, reflected in mean scores ranging from 4.0 to 4.2 across all phases. This indicates a more active role, which is essential for navigating the complexities associated with larger projects.

Overall, the findings suggest that Construction Managers play a vital role in large-scale building projects, with a need to enhance their involvement in small-scale projects to ensure effective management and execution. The differences in engagement levels between project sizes may point to the varying demands and challenges that come with each type of project.

It can be concluded that the extent of construction managers involvement in small scale building project is moderate (not much involved) when compared with the high extent of involvement construction managers have in large scale building projects.

Recommendations

The study recommends that construction organisations should;

- i. Develop specific training that focus on the challenges and requirements peculiar to small-scale and large-scale building projects.
- ii. Conduct workshops that educate Construction Managers on the varying expectations and dynamics associated with different project sizes.
- iii. The relationship between construction managers and building project size is such that

large scale building projects require more degree of construction managers' involvement and broader scope of responsibilities while smaller projects often require a less intensive, and streamlined approach

REFERENCES

- Anyanwu, C.I.(2013). The Role of Building Construction Project Team Members In Building Projects Delivery. *IOSR Journal of Business and Management (IOSR-JBM)*. 14(1). 30-34
- Burgan, S.C, and Burgan, D.S, (2014). One size does not fit all: choosing the right project approach. Paper presented at PMBOK global congress 2014. North America, Phoenix, AZ. Newton Square, P.A: project management institute.
- Chartered Institute of Building CIOB (2013). Construction Managers of the year award. Royalty International, pp:11, ISSN: 2315-7194.
- Collins, W., Parrish, K., and Gibson jr, E. (2017). Defining and understanding small-scale projects in the industrial construction sector. Conference proceeding at creative construction conference, 19th-22nd June 2017. Procedia engineering 196 (2017), pp: 315-322, Primosten Croatia.
- Eja, K.M and Ramegowda, M. (2019). Government project failure in developing countries; a review with particular reference to Nigeria. *global journal of social sciences*, 19(1), pp:35-47/

- ISSN:1596-6216,
Doi:10.4314/gjss.v19i1.4
- El-Sokhn, N. H. and Othman, A. A. E. (2014). Project Failure Factors of Contractors in Construction Project. Bagdad, Iraq. *Journal of University of Babylon for Engineering Sciences*, 26(6). Doi: 10.21608/iccac.2014.44191.
- Glover, J.M (2021). What does construction insurance cost? JMG Insurance Cooperation. Retrieved: <https://jmg.com/construction-insurance-cost/the-cost-of-general-liability-insurance>.
- Greg, H. (2018). Early contractor involvement. Retrieved: <https://www.google.com/amp/s/www.turton.com/blog/early-contractor-involvement>
- Gusakova, E.A and Pavlov, A.S (2020). Project management in large scale construction: development of approaches in the conditions of digitalization. XIII International Scientific Conference, Architecture and Construction. Doi: 10.1088/1757
- Josey, W.C and England, K. (2009). Utilizing a project profile matrix to determine project management requirements. Paper presented at PMI global congress 2009. North America, Orlando, FL. Newton Square, P.A: project management institute.
- Kang, Y. Jin, Z, Hyun, C, and Park, H. (2018). Construction management functions for developing countries: case of Cambodia. *Journal of management in engineering*, 34(3), doi: 10.1061/(ASCE)ME.1943-5479.0000609.
- Mamoon, M. A (2014). The Influence of Construction Manager Experience in Project Accomplishment. *Management Studies*. 2(8). 515-532. doi: 10.17265/2328-2185/2014.08.004 .
- Ogunsanmi, O.E (2016). Determining the essential skill requirement for construction managers in Nigeria. *International journal of construction supply chain management*, 6(2), pp; 48-63, doi: 10.14424/ijscsm602016-48-63.
- Onuoha, D. O and Ibe, G.C (2020). The Effect of Class Interval and Number of Classes on the Accuracy of Measure of Central Tendency.
- Onyia, U. (2019). Improving the supervising and managerial skills and competence required in construction management in Nigeria. *Unpublished: Ph. D thesis, (school of built environment and architecture). London, south bank university*.
- PMBOK. (2013). Construction Projects. A Guide to Project Management Body of Knowledge. Seventh Edition, Project Management Institute Standard Committee, Newton Square.
- PMBOK. (2013). what is resource allocation in project management? Project management guide. Retrieved: <https://www.wrike.com/project-management-guide/faq/what-is-resource-allocation-in-project-management/>.
- Project Management Method (2020). Project Sizes. Small, Medium and Large. Retrieved: <https://www.mppmm.com/project-sizes.php>
- Raishankar, S (2019). Re: how much precision level in sample size selection is acceptable? Retrieved: <https://www.researchgate.net/pos>

- [t/how-much-precision-level-in-sample-size-selection-is-acceptable/5d9b16743d48b713f82d6958/citation/download](https://doi.org/10.1080/1557877/2020/561136)
- Ravi, T.P, John, K, Mohammed, S and Hashem, M (2022). Knowledge skills and abilities for senior level construction managers: a U.S Industry based Delphi study. *International Journal of Construction Education and Research*, 18(3). Pp: 234-250. Doi: 10.1080/1557877/2020/561136/
- Shibani, A. and Sukumar, D. (2015). The Role of the Project Manager in Construction Projects in India. *Chinese Business Review*, 14 (6), pp: 298-324. DOI: 10.17265/1537-1506/2015.06.003
- Singh, A.S and Masuku, M.B (2014). Sampling Techniques and Determination of Sample Size in Applied Statistics Research; an Overview. *International Journal of Economics, Commerce and Management*, 2(11). ISSN:2348 0386
- Technical Tax Office, Federal Inland Revenue Service Abuja, (2021). Active number of construction firms that paid tax for the year 2021, (field survey).
- Zidane, Y.J.T (2012). Project change in large-scale engineering projects. *Unpublished: Msc dissertation, (Department of production and quality engineering, faculty of engineering science and technology) Norwegian University of Science and Technology.*