An Evaluation of the Extent of Schedule Overruns on Cost of Tertiary Institution's Building Projects [1]

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ABSTRACT

This study assessed the impact of schedule overruns on the costs of building construction projects in tertiary institutions in Nigeria. The study sought to assess the magnitude of schedule overruns and their effects on the ultimate cost and quality of building construction project delivery. The research utilised a descriptive survey and exploratory mixed-method methodology, employing purposive, convenience, and census sampling to select 243 practitioners from six Federal Universities in Nigeria's North Central Zone. Data was collected from respondents and building construction projects using a well-structured questionnaire, semi-structured or concentrated group discussions, personal observations, and site visits. IBM SPSS Statistics 26.0 generated frequency distribution tables and charts of the acquired data. The study's primary objective was examined using content analysis utilising performance data analysis. The study's findings reveal that, among thirty (30) building construction projects analysed, twenty-nine (29) experienced schedule overruns ranging from 75% to 230%, while one did not. Thirty (30) building projects were completed within budget, although the average cost overrun was significant. Cost overruns escalated in twenty-nine (29) of the evaluated construction projects. Remarkably, fewer than 50% of the 30 building construction projects that were finished under budget had a cost variance between their initially estimated cost and their actual completed cost.

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INTRODUCTION

The Federal Government of Nigeria has responded to infrastructural development and educational funding in Nigeria's higher education institutions through the Tertiary Education Trust Fund (TETFUND) (Akubo, 2024; Onuora et al., 2017). TETFUND accumulated 1.36 trillion Naira in ten years from its inception (Dataphyte, 2019). The money is being utilised for educational projects, particularly construction projects aimed at increasing the infrastructure and quality of higher education in Nigeria. Zailani et al. (2019) noted that the government's funding program has raised great expectations that the shortage of infrastructure in higher education institutions will be resolved. However, the funding program's advantages are insignificant due to project execution failures (Ogbogu, 2011).

Project management approaches have demonstrated to be beneficial in terms of project execution, objective achievement, and portfolio management (Pellicer & Victory, 2006; Najim, 2013; Akinola et al., 2019). Previous research has revealed that in order to address the multidimensional issue of project delays and failures, an adequate framework for the implementation of construction projects in developing nations is required. Adopting a framework for project delivery that takes into account the unique characteristics of a specific location improves the efficiency and effectiveness of construction projects throughout their entire cycle. The need to embark on school building projects within the public sector has been necessitated by the infrastructure deficit and the need to improve education in order to sustain recent economic growth as a result of the commercial discovery of oil (Damoah, Akwei, Ishmael, Amoako, & Kumi, 2020). However, several of these major constructions have faced numerous setbacks, such as abandonment.

Problem Statement

Unnecessary project delivery delays are a common root cause of issues in construction projects, particularly in most developing nations, and Malaysia is no exception, with nearly 80% of traditionally procured projects experiencing schedule overruns. According to Momodu, Olusola, Temitope, and Treasure (2024), postsecondary education in Nigeria suffers from a lack of infrastructure, outmoded instructional facilities, insufficient finance, and other issues. The difficulties faced by Nigerian tertiary institutions have pushed the Nigerian government to take different initiatives in the past to revitalise the country's educational system. Several unfinished construction projects litter higher education institutions in Nigeria following massive fund mobilisation, resulting in project failure (Aghimien & Aigbavboa, 2018). In 2012, the Needs Assessment of Nigerian Public Universities indicated that 163 of the 701 federal government projects in Nigerian universities remained unfinished, postponed, or altogether abandoned, with each Nigerian public institution having four abandoned projects. Poor project planning and management have been identified as factors contributing to project failure (Agundu et al., 2015). Furthermore, stakeholder disputes and poor job quality contribute significantly to project failures and delays (Sunjka & Jacob, 2013). Beyond construction project management, inherent risks include political instability in the case of government-funded projects, excessive bureaucracy in contract or procurement, and a lack of adequate infrastructure such as electricity and transportation (Almutairi, 2016; Zailani et al., 2019).

The study aims to investigate the amount of schedule overrun and its impact on the final cost and quality of building construction project delivery in Federal Universities in Nigeria's North Central Zone.

LITERATURE REVIEW

Time overrun in project delivery refers to the lateness in progress or inability to complete work within the contract schedule time (Isiofia, Ibem, Uzuegbunam & Iloeje, 2023) or the difference in the time between the actual and estimated project duration. Put succinctly, it is the extension of the finish time of construction projects beyond the scheduled delivery date. Time overrun in construction projects is not healthy for industry growth and development. This is because in most cases it leads to cost overrun, dispute, abandonment of projects, revenue loss, the bad reputation of the project team and overall poor performance of the construction sector.

In Nigeria, maintenance in higher institutions may be experiencing changes related to budget cuts and financial crises to manage this physical infrastructure. The issue is compounded by fast-ageing insufficient physical infrastructure, government budget deficit and education budget far below UNESCO recommendation (Ebekozien et al., 2023). Thus, there is a need for an effective and functional tertiary institution to retain effective teaching and learning outputs.

2.1 Construction Project Planning and Scheduling

Planning and scheduling are time-cost oriented processes and, hence, constitute a challenge to project managers and planners when managing their applications (AlNasseri & Aulin, 2015; Akubo, 2024). Scheduling represents a significant task within project management. Scheduling must take into account the trade-offs between time and cost based on the consumption of resources, while minimizing project duration. Planning for resources must ensure the development of reliable schedules.

Detailed construction schedules as stated by Moosavi and Moselhi (2014), are frequently developed by contractors upon the award of contracts and submitted to owners for approval. The approved schedules (project baselines) are needed for project execution, tracking, and progress reporting. Moreover, they provide the legal basis for the administration of construction disputes and claims. Therefore, it is imperative to ensure the fitness of these schedules for their intended purposes. Owners or their agents review and evaluate these schedules based on a number of considerations, which are usually subjective and vary from one organization to another.

2.2 Types of Construction Project Schedule Overruns

Mulenga (2014) states that are non-excusable schedule overruns are caused solely by the contractor or its suppliers. The contractor is generally not entitled to relief and must either make up the lost time through acceleration or compensate the owner. Non-excusable delays are event that are within the contractor's control or that are foreseeable. These are some example or non-excusable delays are: late performance of subcontractor's untimely performance by suppliers and faulty workmanship by the contractor or sub-contractor or sub-contractors. These are overrun conditions that are under the contractor's control or circumstances that are foreseeable (Emeka, 2016). Some of the examples of these overruns causes are as a result of; sub-contractors unbefitting execution of task, improper conveyance of materials, structural flaw from workman, labour strike caused by the contractor. Emeka (2016) is of similar view that non-excusable overruns are caused by the contractor or its suppliers in this case. The contractor is not entitled to any compensation and is expected to finish the work at the specified time of the contract duration or make compensation to the client.

2.2.1 Compensable and Non-compensable Schedule Overruns

Relating back to the excusable and non-excusable schedule overruns, only excusable overrun. Relating back to the excusable and non-excusable schedule overruns, only excusable overruns are compensable. Mulenga (2014) further reiterated that compensable schedule overruns are caused by the owner or the owner's agents. An example of this would be the late release of drawing from the owner's architect. Non-compensable schedule overruns mean that although an excusable overrun may have occurred, the contractor is not entitled to any additional compensation resulting from the excusable schedule overruns.

2.2.2 Concurrent Schedule Overruns

Emeka (2014) was of the view that, concurrent overrun is a circumstance that occur when more than one factor affects a project completion date at the same time. He further argued that when one factor is delaying the completion of a project it is usually easy to compute the time and resources from such situation but more complicated when is being affected by a lot of factors especially when such factors coincide on a critical part of a project in overlapping period of time.

2.3 Building Construction Project in Tertiary Institutions

Buildings represent a substantial percentage of most educational institutions assets, operating costs and user requirements and; their performance level is therefore very critical to educational effectiveness (Okolie, 2011). Educational buildings are designed and built to meet specific or group of needs already determined to a large extent before implementation. In educational institutions, buildings constitute the essential concrete features that enable the teacher to teach effectively. This implies that it is a major resource which can be manipulated to cause learning to occur. The ability of the building to successfully accomplish the purpose for which it is designed measures its success. In this regard, educational buildings are designed to make use of space as an educational tool for the transmission of knowledge and the promotion of learning capacity.
Government has been a major player in education in Nigeria through the implementation of various intervention programs such as the Universal Primary Education, the Universal Basic Education, award of scholarships, and establishment of Education Trust Fund now known as the Tertiary Education Trust Fund (TetFund) (Aghimien & Awodele, 2017; Akubo, 2024) and the mandatory contribution of 2% tax on profit by companies operating in Nigeria. Majorly in tertiary institutions, construction works presently are funded through but not limited to; Capital Projects, TetFund Sponsored Projects, Internally Generated Revenue (IGR) Projects or Donated Projects by organizations or individuals.

2.4 Construction Procurement Overview

Management-oriented procurement systems came into being as the need for developers to take more of the commercial risks than would be in the construction projects generally. The result of this is procurement of management and coordination only for the project which is done in conjunction with a synergy between contractor and client (Akubo, 2024). This type of procurement strategy is based on the client contracting the management of the design and construction to a contractor who un behalf of the client acts as a management consultant. The management procurement strategy is mostly applicable where early start and completion is the requirement for the client, also where project is planning and control oriented. The two prominent variation of this method are construction management and management contracting. For the construction management route, the owner engages the services of the design team and appoint a construction manager (CM) instead assigning the risk and responsibility to a single main contractor. The (CM) is engaged to manage the design and construction activities on behalf on the client for a professional fee. The CM has no contractual relationship with the design team and contractors, and all design and construction contracts are between the client and trade (package) contractors.

However, Management Contracting unlike the Construction Management, package contractors have direct contractual relationship with the management contractor which makes the liability of the management contractor covers up to the construction works. The main drawback of this approach is uncertainty of price at early stage but has the advantage of the constructor having significant opportunity to contribute the design and project planning.

Conclusively, Discretionary/Collaborative system relies on partnering where two or more parties come together and work for the good of the project rather than for the benefit of everyone independently. This process has become inevitably recognized by many as the novel approach for managing the volatile process with the traditional approaches. The aim of the partnership is to foster a working relationship between participants through an agreed communication and commitment that mutually developed. It is aimed at creating and an environment teamwork and trust develop to manage project risks; dispute prevention and fostering a collaborative environment everyone's benefit; leading to successful project completion with desired outcome (Akubo, 2024).

METHODOLOGY

The study used a constructive research approach since it is appropriate for this type of research. To be classified as a constructive research approach, any study must have gone through the six phases of problem identification, demonstrating in-depth understanding of the topic, solution construction, construct justification, highlighting both theoretical and practical contributions, and examining the scope of applicability (Oyegoke, 2011). This study will use both a descriptive and exploratory (Mixed Method) research approach. This strategy has been shown to contribute to the current body of knowledge by demonstrating a comprehension of the relationships between the many conceptions on which the study will be based.

The study plans included both target and accessible sample populations. As previously stated, the target populations for this study include professionals and building construction projects in Nigeria's North Central region, as well as registered Nigerian built environment professionals in the Zone (architects, builders, engineers, project managers, and quantity surveyors). In Nigeria, each professional has its own governing and monitoring professional body, such as the Nigerian Institute of Architects (NIA), the Nigerian Institute of Building (NIOB), the Nigerian Society of Engineers (NSE), the Chartered Institute of Project Managers of Nigeria (CIPMN), and the Nigerian Institute of Quantity Surveyors (NIQS). All of these professionals will participate in the research.

The north-central area contains major geographical characteristics and identities. The confluence of the Niger and Benue rivers lies in Kogi state, just south of the Federal Capital Territory. The choice of data collection method was influenced by the fact that the study questions required both quantitative and qualitative data; thus, a mixed methods approach was used. To collect quantitative data, a questionnaire with closed-ended questions was the selected data collection method due to its low cost and convenience of collecting large amounts of data in the format acceptable for the chosen data processing strategy. According to AlNasseri (2015), the technique utilised to transmit questionnaires to the selected sample is an important phase in the survey design process. To collect quantitative data, performance data from current and completed building construction projects in the individual states in the North Central Zones were gathered with the goal of enriching and solving the problem that this research aims to address. The study's population of live projects (performance data) came from seven federal universities in Nigeria's North Central Zone. The population of building construction projects in this study was divided among the Schools (Federal Universities) covered by the study. The stratified random selection approach was used to choose building construction projects (performance data) for the study.

This section discussed the questionnaire's reliability in light of the responses obtained. The reliability of an instrument is determined by its consistency in measuring the properties it is intended to measure. When an instrument provides less variance in repeated measurements of an attribute, its dependability is better. In other terms, reliability can be defined as a measurement tool's dependability, stability, and consistency. When the test is done on the same sample of persons on multiple occasions, the results are compared using coefficient computation. To identify and assess the primary elements responsible for project management schedule overruns on building construction project delivery in Nigerian federal universities, frequency was used to achieve this goal. This was generated using IBM SPSS Statistics version 26.

Results

The study population comprises 243 professionals employed by physical planning units of the Federal Universities in the North Central zone, Nigeria. The professionals working in these institutions were given the self-administered questionnaires. The number of questionnaires distributed was determined using the census sampling technique for sample size determination, thus resulting in a sample size of 243. Table 1 displays the number of questionnaires retrieved and deemed suitable for analysis.

Table 1 Response from the Federal Universities within the study area

S/N	Targeted Professionals	Population Size	Sample Size	Sample Returned	Number Used
1	FULO	36	36	34	33
2	FUMN	43	43	40	40
3	UNILO	54	54	51	50
4	UNIJO	68	68	66	65
5	FUAM	42	42	40	40
	Total	243	243	231	228

Demographic characteristics of respondents

The initial section of the questionnaire provides an overview of the respondent's attributes, such as their field of expertise, years of professional experience, qualifications, and sector of operation amongst others.

Table 2 Discipline of respondents

Discipline of Respondents					
		Frequency	Percent	Cumulative Percent	
Valid	Quantity Surveyor	52	22.81	22.81	
	Project Manager	23	10.09	32.9	
	Builder	45	19.74	52.64	
	Architect	61	26.75	79.39	
	Civil Engineer	28	12.28	91.67	
	Others	19	8.33	100.0	
	Total	228			
Missing					
Total		263	100.0		

Table 2 displays the distribution of disciplines among the participants in the study. It is worth mentioning that the majority of respondents, specifically 21 individuals (24.42%), are engineers, while 17 individuals (19.77%) are project managers. Additionally, other professionals such as consultants and quantity surveyors have also contributed, with 12 and 9 participants respectively. Furthermore, engineers had the highest number of responses, with 21 individuals, while procurement officers and land surveyors had the lowest response rates, with only 2 individuals each.

Table 3 Level of education

Qualifications	Frequency	Percentage
HND/ B.Sc/B.Tech /B. Eng	154	67.54
MBA/M.Sc/M. Eng	67	29.39
PhD	7	3.07
Total	**228**	**100**

Table 3 displays the level of education of the practitioners in the study. It is also worth mentioning that the majority 154 (67.54%) of respondents had HND/B.Sc/B.Tech/B.Eng, while 67 of the practitioners (29.39%) had MBA/M.Sc/M.Eng as their level of education. Additionally, 7 (3.07%) of the other professionals had PhD as their qualification.

Table 4 Years of experience of respondents

Years of Experience					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 5 Years	12	4.6	5.3	53.0
	5 – 10 Years	13	4.9	5.7	57.7
	11- 15 Years	30	11.4	13.2	70.9
	More Than 15 Years	173	65.8	29.1	100.0
	Total	228	86.7	100.0	
Missing	System	35	13.3		
Total		263	100.0		

Table 4 displays the number of years of experience of all the respondents who took part in the study. It is worth mentioning that 173 respondents accounting for 65.8% of the total, have accumulated 15 years or more of experience in the building construction industry. Additionally, 30 practitioners, representing 11.4% of the total, have accumulated between 11 and 15 years of experience. Additional 13, which is 4.9% of respondents have also dedicated a period of 5 to 10 years to the industry. The age group with the lowest response rate was less than 5 years, with 12 responses 4.6%.

Building projects experienced schedule overruns

Figure 1 displays the number of building projects they have embarked on and experienced schedule overruns. It is worth mentioning that 12 practitioners experienced schedule overruns between 1 to 5 projects. Thus, 23 responses accounted from 6 to 10 projects. Additionally, 175 individuals have experienced schedule overruns cumulatively between 6 to 10 building projects. While 11 respondents attributed that they have also experienced schedule overruns when they handled 16 to 20 building projects. The least response rate was between 20 to 25 building projects, 7 practitioners experienced schedule overruns.

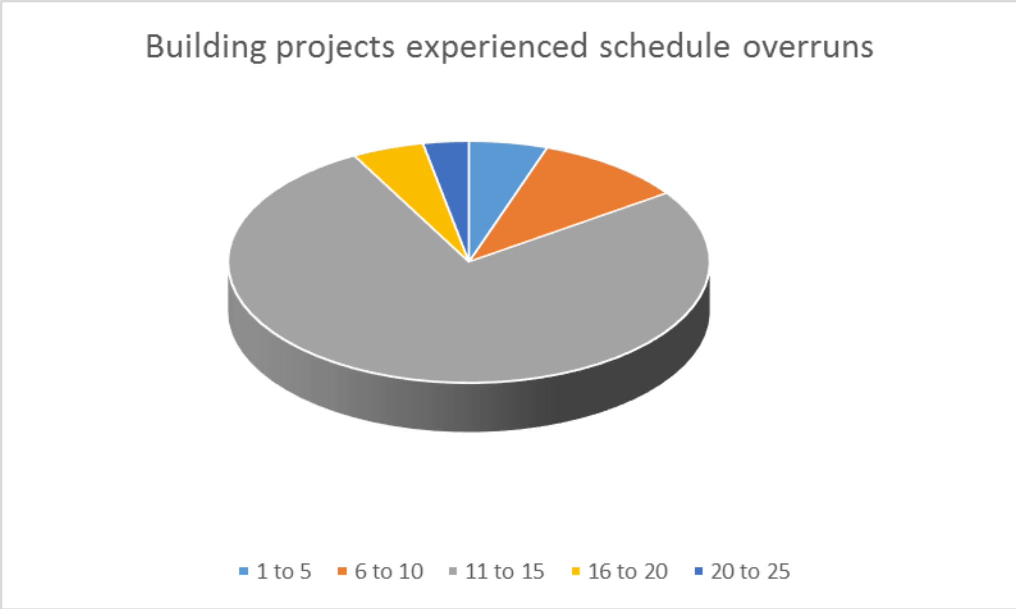

Figure 1 Building projects experienced schedule overruns

The extent of schedule overrun on final cost and quality of building construction project delivery.

Tables 4, 5, 6, show the details of the performance data on the 30 building construction projects assessed from the Federal Universities within the study area. These building projects were used in addressing the extent of schedule overrun on final cost and quality of building construction project delivery in the Federal Universities within the study area.

Table 4. List of building projects from Federal Universities within the study area

S/N	**Types**	**Initial Contract Sum**	**Final Contract Sum**	**Difference in Sum**	**Duration scheduled for project (months)**	**Duration project completed (months)**	**Difference in Schedule (%)**
1.	Construction of teaching & research farm	38,213, 211.00	48,053,225.00	9,840,014.00	32	65	203
2.	Construction of SEMT classroom	160,197, 048.78	160,197, 048.78	0.00	16	24	150
3.	High upgrade and renovation of indoor sport hall & supply basketball upright	6,369,100.00	8,639,200.00	2,270,100.00	20	27	135
4.	Rehabilitation /upgrading of sport facilities in both campuses	14,317,500.00	16,527,000.00	2,209,500.00	54	72	133
5.	Construction of earth dam	474,940,620.00	565,790,610.00	90,849,990.00	31	48	155
6.	Construction of hostel perimeter fence	65,641,980.00	85,981,701.00	20,339721.00	15	22	147
7.	Construction of hostel admin office & hall warden office	95,022,864.00	98,130,498.00	3,107,634.00	17	32	188
8.	Construction of 500-seater lecture theater	69,589,764.23	75,049,354.13	5,459589.90	12	15	125
9	Construction of Basic Clinical Sciences Building	75,456,121.00	76,617,222.00	1,161,101.00	24	22	92
10	Construction of Faculty of Engineering 500-Seater Lecture Theatre	24,567,167.00	36,711,227.00	12,144,060.00	18	20	111

(Source: Author's Compilation 2024)

Table 5 List of building projects from Federal Universities within the study area

S/N	Types	Initial Contract Sum	Final Contract Sum	Difference in Sum	Duration scheduled for project (months)	Duration project completed (months)	Difference in Schedule (%)
1.	Renovation of Female student hostel block C & L Bosso	18,233, 661.00	33,045,666.00	14,812,005.00	12	15	123
2.	Renovation of Female student hostel block F Gidan Kwano Phase I	60,777, 812.28	62,237, 211.48	1,459,399.20	6	10	166
3.	Renovation of Female student hostel block F Gidan Kwano Campus Phase II	16,435,307.00	18,319,440.00	1,884,133.00	10	12	120
4.	Renovation of Male Student Hostel Block F Gidan Kwano Campus	12,722,660.00	16,457,000.00	3,734,340.00	9	12	133
5.	Renovation of Male Student Hostel Block F Gidan Kwano Campus	44,506,220.00	65,023,360.00	20,517,140.00	8	11	136
6.	Renovation of Female student hostel block C&L Bosso	67,413,830.00	87,123,271.00	19,709,441.00	6	8	133
7.	Construction of Faculty of Engineering 500-Seat Lecture Theatre.	105,232,435.00	118,104,958.00	12,872,523.00	14	20	143
8.	Construction of Faculty of Science 500-Seater Lecture Theatre	199,923,755.13	205,334,514.53	5,410,759.40	16	18	113
9.	Construction of Faculty of Arts Board Room	74, 678,345.00	81, 234,445.00	6,556,100.00	24	18	75
10.	Construction of Faculty of Science Phase V	203, 978,334.00	205, 788,489.00	1,810155.00	16	16	-

(Source: Author's Compilation 2024)

Table 6 List of building projects from Federal Universities within the study area

S/N	Types	Initial Contract Sum	Final Contract Sum	Difference in Sum	Duration scheduled for project (months)	Duration project completed (months)	Difference in Schedule (%)
1.	Construction of Advancement Centre Building	182,133, 311.00	190,440,662.00	8,307,351.00	16	18	113
2.	Construction of Basic Clinical Sciences Building	201,172, 304.00	260,417, 508.00	59245204.00	13	14	108
3.	Construction and furnishing of Home Economics and Food science building	166,569,700.00	188,129,900.00	21,560,200.00	20	23	115
4.	Construction and furnishing of English Drama Studio building	114,217,810.00	116,112,000.00	1,894,190.00	15	17	113
5.	Construction and furnishing of Faculty of Social Sciences building	274,190,020.00	316,320,609.00	42,130,589.00	21	24	114
6.	Construction and furnishing of Faculty of Law Professorial suite	165,313,201.00	187,811,880.00	22,498,679.00	14	20	143
7.	Construction of Surveying and Geo-Informatics Department	125,220,421.00	128,109,298.00	2,888,877.00	17	18	106
8.	Construction of Estate Management Department	109,259,433.13	125,110,412.10	15,850,978.97	17	15	88
9.	Construction of 500-Seater Lecture Theatre for Faculty of Communication and Information Science Type (B)	246,223,123.00	281,345,677.00	35,122,554.00 (14.26%)	24	20	83
10.	Construction of Department of Optometry and Vision Science	124,908,213.00	126,987,223.00	2,070,010.00 (1.66%)	13	12	92

(Source: Author's Compilation 2024)

Further analysis in tables 4, 5, 6, shows that out of the 30 building construction projects assessed from the Federal Universities within the study area, 29 of the building projects experienced schedule overrun ranging between 75% to 230%, while only 1 made it without experiencing any schedule overrun. 30 were completed within budget, while on the average, there was a corresponding cost overrun noticed amongst the 30 building construction projects as depicted in the tables. The cost overrun increase was identified on 29 of all the building projects assessed. It is also interesting to note that out of the 30 building construction projects completed within budget recorded an exact less than 50% cost difference between the initial estimated cost and their final completed construction cost as depicted in the tables.

Discussions

Tables 4, 5 and 6 revealed that of the 30 building construction projects evaluated from the Federal Universities in the study area, 29 encountered schedule overruns ranging from 75% to 230%, while only 1 project was completed without any schedule overrun. Thirty projects were finished within budget; nonetheless, an average cost overrun was observed across these thirty building construction projects, as illustrated in Table 4. The increase in cost overruns was detected in 29 of the evaluated building projects. Notably, of the 30 building construction projects completed within budget, fewer than 50% exhibited a cost variance between the initial estimate and the final construction cost, as illustrated in Table 5. The findings of this study align with those of Aghimien and Awodele (2017), who asserted that educational construction projects in Nigeria experience cost overruns.

In comparison to the findings of Omoregie and Radford (2006), which indicated a minimum average percentage increase in costs of public projects in Nigeria of 14%, there is a notable enhancement in the cost performance of construction activities within the Nigerian construction sector. Nonetheless, despite the notable reduction in cost overruns observed in these studies, the educational buildings remain at risk, as the result (4.78%) exceeds the acceptable range established by the National Institute of Building Science (2013), which specifies that the permissible deviation between the final estimated cost and the final completion cost should be between 2% and 3%. This indicates that more measures can be implemented to further reduce the disparity between the initial estimated cost and the actual cost of constructing educational buildings.

Notably, the 30 projects finished above budget and had a cost overrun on the final construction cost that precisely didn't match with the initial predicted cost, as illustrated in table 6. The reason for this might be traced to the way and manner governing the procurement of construction projects in most institutions, particularly those financed by the government agencies like TETFUND etc. Certain projects are rigidly established without provision for deviation. Consequently, it is not unusual for organisations to assert that they have finalised construction projects at the precisely projected cost. This rationale can thus explain the notable achievement regarding cost and schedule efficiency in this study when juxtaposed with other studies conducted on various public and private projects both domestically and internationally.

Subsequent examination of table 4 further reveals that from the 30 evaluated building projects, only 1 (1% of the total) were finalised within the projected timeframe, whereas the remaining 29 (99% of the total) encountered time overruns ranging from 17% to 860%. On average, there is an overestimation of project length by 130.25% across all evaluated projects. This indicates that these construction projects exhibit subpar temporal efficiency. This detrimental condition is particularly discouraging given the urgency inherent in educational construction projects, where timely completion is essential to accommodate the annual surge of students.

Conclusion

That schedule overruns exist on out of the thirty (30) building construction projects accessed from the Federal Universities within the study area. Twenty-nine (29) of the building projects experienced schedule overrun ranging between 75% to 230%, while only one (1) made it without experiencing any schedule overrun related issue. Thirty (30) of the building projects were completed within budget, while on the average, there was a corresponding cost overrun noticed amongst the 30 building construction projects. The cost overrun increase was identified on twenty-nine (29) of all the building projects accessed. It is also interesting to note that out of the thirty (30) building construction projects completed within budget recorded an exact less than 50% cost difference between the initial estimated cost and their final completed construction cost.

Given the outcomes of the results emanating from this study, this study now concludes that; schedule overruns exist on about 95% of all the building construction projects accessed from the Federal Universities within the study area, concerted effort should be put in place to help stem the tide of this incessant incidence of schedule overruns. All the variable likely to precipitate on the issue should be nipped in the bud outrightly. Delays in honouring certificates of payments as well as the non-payment of contractors by the supervising agents of government should as a matter of urgency and necessity be up and doing in the discharge of their duties. On the aspect of cost, a lot also needs to be done. Adequate design information should be readily addressed as this has shown from interaction with practitioners on-site has proven. This as a result of the lack of ample time to provide information with regards to detailed construction drawings and other contract-related documentations.

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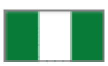

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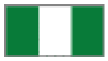

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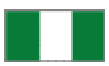

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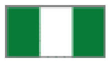

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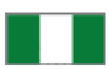

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