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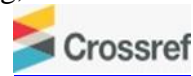
*Aliu Salumanu Momodu, Akinradewo Festus Olusola, Arijeloye  
Bamidele Temitope, Ijeh Oriabure Treasure*



## Evaluation of Effects of Unethical Practices on Cost and Time Performance of Construction Projects in Tertiary Institutions in Edo State, Nigeria

 Aliu Salumanu Momodu<sup>1\*</sup>, Akinradewo Festus Olusola<sup>2</sup>, Arijeloye Bamidele Temitope<sup>3</sup>, Ijeh Oriabure Treasure<sup>4</sup>

1-4Department of Quantity Surveying, Federal University of Technology, Akure, Nigeria



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### Abstract

**Purpose:** Unethical practices in the construction sector have dire consequences for effective delivery of projects and trickling down to the poor performance of construction projects. This research evaluated the effects of unethical practices on cost and time performance of construction projects in tertiary institutions in Edo State, Nigeria.

**Materials and methods:** Respondents were drawn from a public tertiary institution in the State, which was the focus of the study. The study adopted a mixed method design of quantitative and qualitative approaches. 30 questionnaires were self-administered by census on identified human samples. Thereafter, semi-structured interview questions were used purposively to elicit relevant information from 5 targeted participants to validate the data received. The

data received were analyzed using regression analysis and paired samples t- test. Microsoft Excel and Statistical Package for Social Sciences (SPSS) version 23 was used to carry out the analyses.

**Findings:** It was established that there was a significant relationship between unethical practices and project performance. It was also established that the projects performed well in terms of costs but performed poorly in terms of time.

**Implications to Theory, Practice and Policy:** The study further established that the predominant effect of unethical practices on performance of tertiary institution projects in Edo State is time-overrun.

**Keywords:** *Ethics, Professional Ethics, Tertiary Institution, Project performance.*

## 1.0 INTRODUCTION

Physical infrastructure is momentous to performance of students in tertiary institutions (Mukhtar 2021). The provision of sufficient physical facilities in academic institutions impact positively on students' performance (Akomolafe and Adesua, 2016); and are crucial for effective teaching and learning (Musa & Ahmad, 2012). As important as physical infrastructure in academic-performance improvement of Tertiary institution students has been, Isa and Yusoff (2015) reported that higher academic institutions in Nigeria have debilitating pecuniary needs for rehabilitation and procurement of facilities for performance of students. According to Okoro and Ibiam (2012), tertiary education in Nigeria has been inundated by a paucity of infrastructure and outmoded facilities for learning, and low funding, inter alia.

The challenges of the Nigerian tertiary institutions necessitated various steps to be taken by the Nigerian government in the past to restore the dwindling fortune of the nation's educational system (Mukhtar 2021). The National Bureau of Statistics (2012) revealed that education is funded in Nigeria through the Tertiary Education Tax Fund (TETFund), Donor Agencies, Non-Governmental Organizations (NGOs), and other intervention initiatives. Amin and Olatunji (2020) stated that TETFund and Capital Project Funds (CPF) were some of the intervention agencies of the Federal Government established with the responsibility of seeing to the survival of tertiary education in Nigeria.

Despite the numerous financial interventions, tertiary institutions in Nigeria have performed poorly and Inuwa et al. (2015) noted that projects executed were either being left uncompleted or completed above budget, behind schedule and below standard consequent upon unethical and sharp practices that spur professionals to contravene approved standards of professional behavior. It thus shows that the professionals in the Nigerian building industry are not immune from the perceived national trend in ethical erosion (Ameh & Odusami, 2010). The pecuniary resources available to tertiary institutions in Nigeria are frittered away by the administrators of such institutions who corruptly enrich themselves and the consequences are the paucity of infrastructure and scholarship decline in the nation's educational sector (Iliya, et al., 2018).

The monster of corruption permeates every sector of the Nigerian society; and the nation is blessed with so much wealth that would have given her a pride of place in global affairs if not for corruption (Adebanjo, 2011). According to Olatunji et al. (2016), unethical behavior is an impediment to economic development and sustainable growth in any given society. Dantong et al. (2017) revealed that unethical practices subject construction projects in Nigeria to delays, cost over-run and frequent maintenance work.

Against the above background, it has become an imperative to carry out an evaluation of the effects of unethical practices in the cost and time performance of tertiary institution projects in Edo State, Nigeria, where a lot of massive infrastructural projects spanning the tenures of successive managements have sprawled the institutions' landscapes via various intervention programmes over the last two to three decades. That is what this study is about.

### Research Problem

Construction projects delivery in public tertiary institutions in Nigeria are compulsorily done in line with the provisions of the Public Procurement Act 2007 by the Physical Planning Development Units (PPDU) which are within the ambits of the office of Chief Executive Officers (Olatunde & Alao, 2017). This entails that projects must be fully designed and priced, and

tendering ethics observed in the procurement cycle. Despite these processes, projects are still not completed on schedule, within cost estimates or are out-rightly abandoned as a result of corruption and other unethical practices among stakeholders. In spite of the foregoing and other ethical codes, Tahir Nawaz & Ikram (2013) observed that such codes are breached willy-nilly, and tertiary institution projects are still being hunted by the evil of corruption, fraud and other unethical practices.

Like in other construction sectors, the Nigerian tertiary institutions have become the cynosure of public attention with a glaring miasma of corruption and other types of ethical vices hanging around project execution. For instance, the Socio-Economic Rights and Accountability Project (SERAP, 2018) reported that contract awarded to cronies/relatives and at inflated rates abound in Nigerian universities among other forms of corrupt practices and these have had adverse effects on the quality of education received by students in the universities. The objective of this study was to evaluate the effects of unethical practices on cost and time performance of construction projects in tertiary institutions in Edo State, Nigeria.

### **Scope and Limitations of the Study**

This study was premised on some selected building construction projects in Auchi Polytechnic, Auchi in Edo State, Nigeria, which were used as case studies. The contractors' representatives and the in-house construction professionals in the Physical Planning Department such as the Architects, Quantity Surveyors, Builders, and Structural Engineers who participated directly in the construction of the projects were reached for fact-finding. The significant relationships between unethical practices and project performance in terms of cost and time were established. Difficulty in obtaining necessary data for this research from construction professionals who scrupled out of apprehension in parting with relevant information was a snag on the study.

## **2.0 LITERATURE REVIEW**

### **Ethics**

Ethics is a set of moral principles of right and wrong that inform people's attitude and conducts. Ethics has been seen differently by different scholars in the light of what is right or what is wrong, or what is good or bad in a given discipline or profession. Ethics, according to Parveen & Showkat (2017), helps to distinguish between acceptable and unacceptable behaviour. Ethics focuses on how humans should lead their lives, particularly, how they should behave towards others and it is apropos to all forms of human activities. Ethics deals with pertinent questions at all levels such as the kind of life, a life of virtue, happiness or opulence. If we choose to live happily, should it be to the detriment of others? Is it right to be dishonest? What obligations do we owe fellow human beings and society? Those are the kind of questions ethics put forward. Ethics consists of fundamental issues of practical decision-making. It deals majorly with the standards by which human actions are judged right or wrong (Peter, 2021).

### **Professional Ethics**

Professional ethics govern the conduct of professionals (Le et al, 2014). It is an arrangement of ethical principles or behavioral guidelines that describe work standards. Every organization has a code of ethical guidelines which defines the acceptable standard behaviour and qualities expected of its employees (Oladirin and Ho, 2014) and such codes have become the regular routine in the modern business world, the construction industry inclusive. According to Akinrata (2020), ethical

standard is vital to any profession as a regulatory compass of rules of acceptable behaviour for running its affairs and professional ethics impact on the reputation and economic viability of professionals. Resnik (2020) classified ethical principles into honesty, objectivity, integrity, carefulness, empathy, openness, competence, non-discrimination, observance of relevant regulations/laws, environmental friendliness, dependability, respect for human privacy and dignity.

While explaining that ethics instills a procedure for deciding how to act in a given circumstance, Resnik had no doubt that each professional body in the construction industry has its own ethical standards that regulate the conduct of its members in the performance of their professional duties. Ethics is momentous in construction industry at ensuring product quality and aiding growth. According to Paul (2020), ethics influences quality of construction projects, enhances world-wide success of construction industry, enables optimal performance within the industry and it generates enduring economic returns.

### **Tertiary Education**

Tertiary education according to the World Bank, is the formal type of public and private post-secondary education which includes the universities, the vocational and technical training institutions and colleges. Tertiary education fosters growth, reduces poverty and boosts the common prosperity of the people, and is a prerequisite for innovation and growth as it empowers the educated by making them “more employable” (World Bank, 2021). (Ngonso, 2022)(Ajayi & Adeniji, 2009) explained that in Nigeria, tertiary education, which is the same as higher education, is classified by the “National Policy on Education” 1998 to include universities, technical educational institutions which include the polytechnics, the teachers training institutions such as colleges of education, and the monotronics which handle professional training..

### **Project Performance**

Aigbavboa et al. (2016) stated that should construction projects be achieved within stipulated contract time, cost and quality and to the satisfaction of stakeholders such a project is adjudged a successful project. Takim (2002) holds that cost, time and quality form the key performance indicators for construction projects and gives key project performance indicators used in the UK following the Egan’s report of 1998 as: construction cost, construction time, defects, client’s satisfaction, profitability, productivity, predictability of design cost/time, and safety. Project performance indicators according to (Kerzner 2000 in Inuwa et al., 2015) are cost, time, quality, health and safety, stakeholders’ satisfaction. The successful performance of any construction project depends on the performance of the handlers of the project (Aliyu et al., 2015); for that reason, professionals in the construction industry must have the pertinent knowledge, skills, techniques and tools to achieve the project objectives (Essays UK, 2018).

### **Effects of Unethical Practices on Construction Projects’ Performance**

The gruesome effect of unethical conducts on projects and the construction industry cannot be over-emphasized. Construction projects in Nigeria are characterized by underperformance which Osuizugbo (2019) blamed on construction professionals’ unethical behaviours. Nduka (2019) decried the poor performance and low contribution of the construction industry in Nigeria to the GDP in 2018, blaming it on corruption in the procurement process. Like other production industries, the construction industry is plagued with challenges that affect its products (Dorcas et al., 2019). Such challenges which make the industry unable to deliver projects successfully include

(Idoro, 2014): high corruption rate, poor quality works, non-involvement of the right professionals, poor project supervisions, high cost of construction, delay in project delivery, high incidence rates of building collapse, excessive cost over-run, poor control, and conflict among professionals in delivery of professional services among others.

The Nigerian construction industry is littered with quacks who assume the roles of professionals and such practice seriously hampers the performance of the industry leading to the incessant building collapses in the country, low productivity and low level of client satisfaction (Osuizugbo 2018). The good performance of the construction industry is undermined by the attitude of many professionals who, once they are approached first by clients, refuse to co-opt other professionals whose inputs are mostly vital to projects' execution (Osuizugbo, 2019).

In recent times, Nigeria has experienced the collapse of various types of building structures which claimed many lives and damaged properties worth millions of Naira (Odeyemi et al., 2019). Building collapse has become a recurrent decimal, a worrisome menace, a national nightmare and an enduring embarrassment in Nigeria. Odeyemi et al., (2019) documented fifty-six (56) cases of reported building collapse in Nigeria between 2009 and 2019 in which over two hundred deaths were recorded. The collapses were blamed mainly on structural defects resulting from ethical perversions, professional incompetence, substandard and poor quality of materials among others.

All extant studies on unethical practices within the construction industry reported its negative impact on the industry (Paul, 2020). Dantong et al., (2017) revealed that unethical professional practices make construction projects in Nigeria vulnerable to delays, cost overruns and frequent maintenance work. Akpomiemie et al. (2018) stated that unethical practices have general enduring impacts that are detrimental to the performance of construction projects and the construction industry. Unethical practices affect the economic development of countries and their human resources (Aigbavboa et al, 2016). Apart from its effects on the economy of any country, unethical practices distort the entire construction process, hinder free play of market forces, and discourage investors from investing in the construction industry (Olatunji Et al. 2016).

According to Akinrata et al (2019) and Aigbavboa et al (2016), effects of unethical practices include poor quality infrastructure, reduction in building lifespan, low productivity/efficiency of project team, clients' dissatisfaction, stakeholders' conflicts, and loss of public trust. Akpomiemie et al. (2018) also reported wasted tender expenses, tendering uncertainty, increased project costs, economic damage, blackmail, criminal prosecutions, fines, blacklisting and reputations risks as effects of unethical practices. According to Shah & Alotaibi, (2017), unethical practices lead to loss of income by governments and clients, continuous insecurity of lives and properties, needless and baseless expenditures, rising poverty levels and reducing quality of life are resultant effects of unethical practices. Ethical organizations and professionals could lose their jobs to unethical practitioners (Stansbury & Stanbury, 2018). Akinrata et al., (2019) indicated that in a review of construction industry ethical practices in the US, respondents asserted that unethical behaviour gave a poor public image of the industry; negated the level of trust among clients and contractors' workers; and among contractors and professionals.

Inuwa et al. (2015) citing various sources, summed up the effects of unethical professional practices on building projects performance as follows: dissatisfaction of building owner/users; abandonment; building collapse; disputes/litigations; cost over-run; time over-run; delays in completion; environmental degradation; erosion of professional values; high cost of maintenance;

high accident rates; poor aesthetic values; poor monitoring and control of projects; reduction of client's confidence on professional competence; poor value for money; poor/inefficient workmanship; portrayal of bad image of the construction industry; rework; resource underutilization; vulnerability to frequent maintenance work; delays and cost over-runs. The researcher went further to explain that construction companies are also affected by way of: wasted tender expenses; uncertainty of tendering; high project costs; economic damage; blackmail; criminal prosecutions; fines; blacklisting; and risk to reputation.

According to Aigbavboa et al., (2016) & (Akinrata, et al. (2019), unethical professional practices lead to dissatisfied clients, delayed compensation, low productivity and project team inefficiency, deterioration in professionalism, poor workmanship, high maintenance cost of completed projects, increased project costs, poor coordination of projects, poor quality infrastructural development, stunted industrial growth, reduction in building life span, loss of public trust and construction industry conflicts.

Society is harmed if unethical practices are allowed to flourish (Globethics.net report 2018). Corruption has raised aggressive debates among citizens of Nigeria as it has unrelentingly punted the construction industry, stunting its growth and threatening to bring the country to its knees (Adekunle, 2019). It poses great danger to companies that fund, guarantee and provide insurance cover to construction and engineering projects. The morbid act of corruption according to Amoah (2022) discourages lawful economic activities, hampers economic growth and development as money meant for social and economic development programmes are diverted into a few investments with the dire consequence of the state's inability to provide public goods and services for its people.

### **3.0 METHODOLOGY**

#### **Research Design**

In this research, the mixed method design was adopted which combined the quantitative and qualitative research approaches. The quantitative approach made use of questionnaire administered on the targeted in-house construction professionals who participated in the selected projects. The qualitative approach was used to confirm and clarify the quantitative data in order to give better meaning or support to the quantitative findings. The qualitative approach made use of a structured oral interview with purposively selected key stakeholders from the targeted population comprising Architects, Quantity Surveyors, Builders, and Structural Engineers. The projects considered for this study were all fifty-four (54) physical building projects from which only five (5) met the criteria for selection. The five projects went through rapid deterioration soon after completion and were deserted outright due to their non-usability, huge funds were expended to retrieve them from failure in order to make them useful once more, and their completion periods were over stretched. Professionals (human sample) of thirty (30) who were directly involved in those projects form the human sample selected. Thereafter, five (five) of the respondents were interviewed to substantiate and clarify the responses. This helped to foster a profound understanding of the subject (Sekaran & Bougie, 2016).

## **Sampling Technique**

The observational and census sampling techniques were adopted for this study. Physical observation of the projects was carried out. The projects were visited to spot-out defects in them and inventories of their physical conditions were recorded on data collection sheets. The researcher focused specifically on the various defects in the projects. This was necessary to give the researcher first-hand information pertaining to the conditions of the physical projects.

According to Anyanwu (2013) when a researcher selects all the elements in a population for his study, this is called census. In this study, the entire thirty (30) identified building professionals and the contractors' representatives who participated in the case-study projects were targeted with questionnaires for their responses. The researcher adopted the census technique because the data population was small and the census would provide the facts and actual data for this study. A minimum sample of thirty (30) questionnaires is acceptable for statistical analysis (Tennant, 2013).

## **Data Collection Instrument**

The research instruments used for this study were structured questionnaire, case study proforma protocol, and interview protocol.

### **Structured Questionnaire**

The questionnaire was structured to investigate each of the objectives and to answer each of the research questions. To ensure free and accurate responses, respondents were not directed to disclose their identity, thus, they remained anonymous. The questionnaire was sectioned into two (2) parts. Section A was designed to collect socio-demographic data of the respondents. Section B was designed to solicit responses on the measures to mitigate unethical practices in project delivery. The questionnaire was made up of close-ended questions with sets of variables in line with the research questions of this study and which the respondents had to tick based on their experiences on a 5-Likert scale made up of 5 = Very high; 4 = High; 3 = Moderate; 2 = Low; 1 = Very low. Bouranta et al. (2009) stated that Likert Scale questions make it relatively easy for respondents to read a whole list of variables thus helping to avoid confusion and increase response rate.

### **Pro-Forma**

The required data on the case studies were collected using pro-forma protocol under the following headings: financing structure, principal actors, involvement level, initial contract sum, final contract sum, initial contract duration, final contract duration, and effects of unethical practices.

### **Interview Protocol**

The interviews of the study follow the same procedure as that of the questionnaire survey using a semi-structured interview protocol with open-ended questions. The interviewees were allowed to freely provide for additional comments that were relevant to the study.

### **Procedure for Data Collection**

Copies of questionnaire were administered on the entire respondents who were identified to have participated in the selected projects for this research. The questionnaire copies were administered by the researcher. Also, interviews were conducted on a one-on-one basis with professionals involved in the projects to obtain relevant data for the research. The interviews and the responses were recorded and transcribed.



## **Methods of Presentation and Analysis**

The answers to questions collected from respondents were presented in frequency tables which were employed in summarizing data before they were analyzed. The method of data analysis applied in this study were the mean item score (MIS), standard deviation, percentages, regression analysis, and paired samples t-test. Computer aided statistical packages - MicroSoft Excel (MS Excel) and Statistical Package for the Social Sciences (SPSS) were used to ease the computational process of the observed data.

## **4.0 FINDINGS**

### **Background Information of Respondents**

Table 1 gives the background information of the respondents for this study. From the result of the analyses, 83.3% of the respondents are in-house professionals who undertook the design, costing and supervision of the case study projects, while the rest of the respondents are from construction companies that undertook the construction of the projects under investigation.

Responses from the professionals show that structural Engineers are most represented with 43.3%, followed by Quantity Surveyors 23.30%, Architects and Builders respectively are the least represented with 16.7%. Most of the respondents held Masters of Science/Masters of Technology (MSc/Mtech) degree (70%), Bachelor of Science/Bachelor of Technology (BSc/BTech) with a score of 16.7% while Higher National Diploma/Post Graduate Diploma come last with 13.3%. None of the respondents held a PhD degree. The results show that the respondents are adequately equipped academically to respond to the questions for this research.

Almost all the respondents are corporate members of professional bodies with 96.7%, others 3.3%. This shows that the respondents are well prepared professionally to give the required information for this study. The average age of the respondents was 45.67 years which indicated they were old enough to be in the service of the department which undertook the supervision of the projects under consideration for this study, thus making their responses valuable. Respondents' years of experience show that 70% of the respondents have 16 years and above years of experience, 26.7% have 11-15 years of experience, while 3.3% of the respondents have 6-10years of working experience. None of the respondents has below 5years of experience. On the whole, an average of 16.33 years was computed for the respondents' years of working experience. This high average number of years is an indication that the respondents have enough years of experience to have witnessed the construction of all the projects assessed for this study. These findings show that the respondents are adequately equipped both academically and in terms of years of working experience with the supervising department, thus, making them capable to answer reasonably and in a reliable manner to the enquiry.

**Table 1: Background Information of Respondents**

Background Information	Parameter	Frequency	Percent
<b>Type of Organization</b>	Client	25	83.3
	Contracting	5	16.7
	<b>Total</b>	<b>30</b>	<b>100.0</b>
<b>Profession of Respondents</b>	Architecture	5	16.7
	Quantity Surveying	7	23.3
	Building	5	16.7
	Structural Engineering	13	43.3
	<b>Total</b>	<b>30</b>	<b>100.00</b>
<b>Highest Academic Qualification</b>	HND/PGD	4	13.3
	BSc/BTech	5	16.7
	MSc/MTech	21	70.0
	<b>Total</b>	<b>30</b>	<b>100.00</b>
<b>Grade of Professional Membership</b>	Corporate	29	96.7
	Other	1	3.3
	<b>Total</b>	<b>30</b>	<b>100.00</b>
<b>Age of Respondents</b>	<b>Frequency</b>	<b>Percent</b>	
31-40	9	30.0	
41-50	11	36.7	
51 and above	10	33.3	
<b>Total</b>	<b>30</b>	<b>100.00</b>	
Mean age of respondents = 45.67			
<b>Years of Experience in Construction</b>	<b>Frequency</b>	<b>Percent</b>	
6-10	1	3.3	
11-15	8	26.7	
16 and above	21	70.0	
<b>Total</b>	<b>30</b>	<b>100.0</b>	
Mean years of experience			

### Quantitative Opinions on Effects of Unethical Practices on Tertiary Institution Projects in Edo State

Table 2 shows the effects of unethical practices on the performance of tertiary institution projects in Edo State based on quantitative opinions. From the study, cost over-run, Time over-run, poor workmanship and high or increased projects costs were ranked high among others with a mean score and standard deviation of 4.454 & 0.498, 4.440 & 0.509, 4.418 & 0.644 and 4.411 & 0.486 respectively. While the least ranked were Poor value for money, Rework, High maintenance cost of completed projects and Reduction in building lifespan with mean scores and standard deviations of 3.277 & 0.637, 3.133 & 0.573, 3.092 & 0.777 and 3.072 & 0.603 respectively.

**Table 2: Effects of Unethical Practices on Performance of Tertiary Institution Projects in Edo State**

Effects of unethical practices	Mean	Std. Dev.	Rank	Remark
Cost over-run	4.454	0.498	1	High
Time over-run	4.440	0.509	2	High
Poor workmanship.	4.418	0.644	3	High
High or Increased projects costs	4.411	0.486	4	High
High accident rates	4.390	0.581	5	High
Poor project monitoring and control	4.355	0.592	6	High
Defective structural development	4.355	0.647	7	High
Portrayal of bad image of the construction industry.	4.305	0.599	8	High
Dissatisfaction of building owners	4.277	0.575	9	High
Poor aesthetic values	4.270	0.608	10	High
Reduction of clients' confidence on professionals	4.092	0.506	11	High
Building collapse	3.401	0.452	12	Moderate
Vulnerability of projects to frequent maintenance work.	3.395	0.749	13	Moderate
Abandonment	3.380	0.545	14	Moderate
Poor quality of projects	3.362	0.389	16	Moderate
Poor value for money	3.277	0.637	17	Moderate
Rework	3.133	0.573	18	Moderate
High maintenance cost of completed projects.	3.092	0.777	19	Moderate
Reduction in building lifespan	3.072	0.603	20	Moderate

Average mean = 3.86 (High)

**Evaluation of the Effects of Unethical Practices on Performance of Tertiary Institution Projects in Edo State: Regression Model**

The model of Table 3 shows the linear probability model summary and overall fit statistics. R of 0.998 shows the strength of the relationship between the independent variable (unethical practices) and the dependent variable (project performance). It shows that unethical practices accounts for 99.8% change in project performance. Hence the equation of the model is represented as;

$$PCT = 0.620 + 1.204E-09 ICC + 1.218 ICT + e$$

(R =0.998, R2 = 99.6%, Adjusted R2 = 99.3%) .

Where,

Pct = Project completion cost & time; ICC = Initial Contract Cost;

ICT = Initial contract time; E = Error term

**Table 3: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.998 <sup>a</sup>	.996	.993	5.67844	.996	246.062	2	2	.004

Table 4 is the coefficients table and it provides information to predict project performance from unethical practices. Column B shows that 1 unit of unethical practices affects the cost performance by 1.2 units and the time performance by 1.22 units. The significance column revealed a statistically significant relationship between unethical practices and project performance.

**Table 4: Coefficients**

Model		Unstandardized Coefficients		Beta	t	Sig.
		B	Std. Error			
1	(Constant)	.620	.920		.184	.207
	Initial contract cost	1.204E-09	.000	.217	5.001	.000
	Initial contract time	1.218	.052	.826	17.480	.000

### Analysis of the Case Study

This section contains the analysis of the qualitative strand of the study.

### Background Information of the Interview Participants

Table 5 shows the background information of the interview participants which comprised their professions, professional status, years of experience, and the role played by each respondent in the projects.

**Table 5: Background Information of Interview Participants**

Interviewee	Profession	Registered	Years of Experience	Role Played
A	Architecture	NIA/ARCN	17	Architectural services
B	Quantity Surveying	NIQS/QSRBN	17	Quantity Surveying/cost management services
C	Builder	NIOB/CORBON	15	Supervision/monitoring
D	Engineer	NIQS/QSRBN	17	Director
E	Engineer	QSRBN/NIQS	17	Structural/civil Designing & Supervision

### Case Study Report on Effects of Unethical Practices on Projects' Performance

Table 6 gives the responses from Interviews on effects of unethical practices on the case study projects selected for this study. The interview participants were asked about their opinions on the effects of unethical practices on the performance of the case studies. All the Interview Participants agreed (100%) that there was time over-run. 76% claimed that the completed buildings went into desuetude soon after completion; and that there parts of the buildings collapsed. Poor project quality and cost over-run came next with 60%. Inflated project costs 52%. Poor value for money

had 44%. Poor workmanship, high maintenance cost of completed projects, poor project monitoring and control, defective structural development scored 40%; while dissatisfaction of building users and vulnerability of projects to frequent maintenance work had 20%. The average level of effects of unethical practices on performance of the case studies is calculated as 50.67% which is moderate.

**Table 6: Interview Participants' Views on Effects of Unethical Practices on the Case Studies A, B, C, D, & E**

Effects of Unethical Conduct	Percent	Remark
Time over-run (delay in completion)	100	High
Desuetude of completed project	76	High
Collapse of part of buildings	76	High
Poor quality of projects	60	Moderate
Inflated project costs	52	Moderate
Poor value for money	44	Moderate
Poor workmanship	40	Low
High maintenance cost of completed projects	40	Low
Poor project monitoring and control	40	Low
Defective structural development	40	Low
Dissatisfaction of building users	20	Low
Vulnerability of projects to frequent maintenance work	20	Low

Average level of effect = 50.67% which is moderate.

### Evaluation of Effects of Unethical Practices on Performance of the Case Study Projects

Table 7 shows the cost and time performance analyses of the five (5) selected case study projects for this study with their concomitant cost and time data. The analysis of the costs shows that three (3) of the projects (C, D and E) were completed at the initial contract sums, while savings were made in two (A and B) with their final completion costs slightly below their initial contract sums. On the whole, an average of 0.09% reduction was made on the five projects assessed.

The analysis of the completion time for the projects revealed that the projects were delivered belatedly with a time over-run of between 30.95% and 128%. On the whole, there was an average of 350.04% time overrun in the projects. This is too high. The result implies that the selected tertiary institution projects sadly performed poorly in terms of completion time. Aghimien and Aigbavboa (2018) discovered 198.8% time over-run in a study they conducted into educational building construction projects in Nigeria; and according to the researchers, there have been persistent hikes in completion times of construction projects in the country. This study corroborated Esangbedo and Okaka (2018) that delay is one of the greatest obstacles to project delivery in Nigeria which is consequent upon increased costs and is more rampant in public projects than in private projects. These findings further affirmed the assertions of Ogunsemi (2015) that the final completion times of most construction projects in Nigeria extend much beyond the initially scheduled time.

**Table 7: Cost and Time Performance of the Selected Case Study Projects**

S/N	Proj. Type	Final Cost (N m)	Initial Cost (N m)	Dev (Nm)	% Dev	Final Time (Wk)	Initial Time (Wk)	Dev (Wk)	% Deviation
1	A	144.15	144.24	-0.09	-0.06	88	42	46	109.5
2	B	152.06	152.11	-0.05	-0.03	92	55	37	67.3
3	C	9.76	9.76	0.00	0.00	32	28	4	14.29
4	D	67.44	67.44	0.00	0.00	55	42	13	30.95
5	E	50.09	50.09	0.00	0.00	114	50	64	128.0
				<b>-0.04</b>	<b>-0.09</b>			<b>164</b>	<b>350.04</b>

*Note: A= Chemical Engineering Workshop/Laboratory, B = School of ICT Building, C = Bursary Extension Block, D = Six Classroom Secondary School Block, E = Architectural Classroom/office Block; M = Million, Dev. = Deviation, % Dev = Percentage Deviation.*

Table 8 shows the paired samples t-test conducted at 0.05 (95%) confidence level for the initial and final contract sums for the case study projects and it revealed a significant p-value of 0.20 which is greater than 0.05 (95%) set for this study. This indicates that the difference between the initial contract sums and the final contract sums is not significant for the projects. This goes to say that the projects performed considerably well in terms of cost.

The time performance of the projects shows a significant p-value of 0.04 (96%) derived for the time performance of the projects and is lower than the 0.05 (95%) confidence level set for the paired samples t-test. This revealed a significant difference between the initial and final completion time for the selected projects.

**Table 8: Summary of the Performance (Cost and Time) of Tertiary Institution Projects Including the Paired Samples T-Test**

Performance	Overall Dev. (Nm)	Overall % Dev	Std. Deviation (SD)	Std Error Mean	/T/	Df	Sign. Level (2-tailed)
Cost	-0.04	-0.09	0.04	0.028	1.532	4	0.200
Time	164	350.04	24.43	10.92	3.002	4	0.040

### Discussion of Findings

The quantitative findings of this study have shown a high level of effects of unethical practices on performance of tertiary institution projects in Edo State which were mainly cost over-run, time over-run, poor workmanship, high or inflated project cost, high accident rates, poor project monitoring and control. These findings corroborated Inuwa et al. (2015) where it was found that the effects of unethical professional practices on building projects performance were: building collapse; cost over-run; time over-run; high accident rates; poor monitoring and control of projects; poor workmanship; high project costs; among others. The findings from the regression analysis of the effects of unethical practices on project performance revealed a statistically significant relationship between unethical practices and project performance.

From the results of the interviews, there was a general consensus among the interviewees that unethical practices accounted for delays in completion time of the projects investigated. This is in line with the quantitative survey where time over-run scored “high”. However, the Interview Participants’ opinions deviated slightly from that of respondents at the quantitative survey which

scored cost over-run “high”, while the Interview Participants scored cost over-run “moderate”. This connotes a good cost performance but poor time performance of the projects investigated.

Furthermore, the findings of the case studies confirmed the quantitative findings of this research being that both studies agreed that there was a statistically significant relationship between unethical practices and completion time. Hence, the delay in completion of the projects investigated for this study.

## **5.0 CONCLUSION AND RECOMMENDATION**

### **Conclusion**

Within the parameter of its objectives, the study evaluated the effects of unethical practices on cost and time performance of tertiary institution projects in Edo State. It established the significant relationship between unethical practices and performance of the projects. The findings of the study have established that there was a significant relationship between unethical practices and their effects on the time performance of projects, but that there was no significant relationship between unethical practices and cost performance of the projects. This is an indication that unethical practices accounted for the delays encountered in completion of the case study projects. The effects of unethical practices in the projects accentuated the decrepit and derelict states of the projects which made them unsafe for habitation no sooner than they had been completed.

### **Recommendation**

Based on the conclusion drawn from the findings of this study, all stakeholders must share a common commitment in the efforts to put the ugly monster of unethical practices at bay. In order to do so, tertiary institution managements and other stakeholders involved in tertiary institution projects should shun acts of primordial sentiments through which contracts are awarded. Following due process will help to ensure transparency and accountability in tertiary institution projects. Project stakeholders should conduct themselves in an ethical manner to ensure that projects are completed on schedule and within appropriate costs.

### **Contribution to Knowledge**

This study reveals the effects of unethical practices in construction projects in tertiary institutions in Edo State, Nigeria; and it is vital as a basis for further studies to subsequent researchers who may wish to undertake further research in this study area which has been devoid of the attention of researchers for so long.

### **Area for Further Studies**

1. Further research can be conducted using larger samples or interviews to probe further details regarding the results.
2. The physical projects investigated for this study were obtained in a federal public institution. Further research can be conducted using state-owned or private-owned tertiary institutions in Edo State for further details in respect of the results.
3. There is need for further studies to obtain an explanation as to why some tertiary institution projects in Edo State collapse soon after completion despite their good cost performance.

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