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Keywords: compliance, core, construction industry, ethics, professionals, standards.

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Level of Compliance of Core Construction Professionals to Ethical Standards in Nigeria

Adeyinka Busayo Funmilola [α], Jagboro Godwin Onajite [σ], Ojo Grace Kehinde [ρ] & Odediran Sunday Julius [ω]

Abstract- The study assessed the level of compliance of construction professionals to ethical standards in the Nigerian construction industry. The study area was Lagos State and the target respondents were the registered professionals including architects, quantity surveyors, builders and engineers. A total of one hundred and seventy (170) questionnaire were randomly administered on the professionals and one hundred and thirty eight (138) were retrieved representing 81.18% response rate. Findings revealed that professionals displayed high level of compliance to clients service delivery with Mean Item Score (MIS) ranged between 3.22 to 3.79, educational and professional qualification MIS ranged 3.18 to 3.71 and standards of practice MIS ranged between 3.16 to 3.63. The overall rating revealed that professionals have highest level of compliance to standards of practice with 54.76%, while the least ranked ethical standards was fair compensation with 49.31%. ANOVA test established a statistical significant difference among the professionals view about compliance of the professionals to clients service delivery (F value=2.447, P value=0.020) and professional development (F value=3.774, P value = 0.001). The overall level of compliance of construction professionals to ethical standards was 52.37%. The study concluded that professionals satisfactorily complied to the ethical standards. The study therefore recommended that professionals should continue to uphold good ethical conducts, for better project performance and delivery in the Nigerian construction industry.

Keywords: ethics, core, compliance construction industry, professionals, standards.

I. Background to the Study

The nature of construction industry is complex and dynamic. Besides, the industry is fragmented and thereby requires the involvement of various professionals and specialists that work together to achieve a common goal (Gray 2000; Gido, Kerzner and Meredith, 2003). Construction activities involves conceptualizing, designing, managing, organizing and coordinating project requirements including time, money resources, technology and methods. All these must be integrated in the most efficient manner possible to complete construction projects on schedule, within estimated budget, in accordance to the required quality and performance expected by the client Nadeem, Sohail and Muhammed (2009).

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The industry's primary goal therefore focuses mainly on achieving value for the money the clients has paid for. This is achieved through good service delivery which centres on ethical standards displayed by the construction industry professionals. Construction industry has the sole responsibility of providing physical development through the provision of infrastructure, manpower development, resource employment, fixed capital formation and improvement of the gross domestic product (Omole, 2000; Hillebrandt, 2000). In the light of this, it is therefore expected that construction professionals should discharge their duties with utmost compliance to professional ethics and standards.

Professional ethics is the justification of standards of behaviour against practical tasks, which is not necessarily limited to technologies, transactions, activities, pursuits and assessment of institutions. It rather involves practical conceptualization of public expectations in the interest of responsibilities, willingness to serve public interest with high competencies (Chalkley, 1990; Fan et al., 2003; Poon, 2003; Poon, 2004a, 2004b). The strength of the link between the construction industry and the public therefore sustains its existence through overwhelming recourse to demand for the services of its practitioners and unique products such that the relationship is a function of the pride of professionalism.

However, the most important threat to the harmonious relationship between the public and the construction industry is the cultural misalignment between public expectations and the construction professional's conducts (Pollington, 1999). This has brought various criticisms and wrong perception of the public about the professionalism of construction professionals in relation to professional ethics. Based on this fact, it is quite evident that the industry needs to be dynamic and re-appraise the ethical conducts and perception of her professionals so that services provided by the industry can be improved. (Lam et al., 2001; Doree, 2004). In response to this, the study therefore appraised the level of compliance of construction professionals (focusing on some selected professionals that are engaged throughout the life cycle of any project) to ethical standards in the nation's quest for modality for combating the endemic and intractable monster of corruption.

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II. The Theory and Practice of Ethics in Businesses Environment

Generally, business ethics involves two tasks. The normative task of defining standards of behaviour and the practical task of applying these standards to business conduct. This is interpreted to be the normative versus the positive approach. The normative approach is concerned with developing models of expected behaviour and seeking out example in the real world that validate the model. This simply means what ought to be done and what is actually done. The positive approach is about describing real world practices whereby prescriptions of the ideal are suspended until the characteristics of real world behaviour are ultimately understood. Normative and positive ethics can in some ways be considered in relation to the theory and practices of ethics and how they are combined (De - George, 1990). The normative definition of professional ethics is tied up with practical concepts and expectations from the public, such as competence and responsibility.

Allen and Davis (1993) established that combination of professional values and real life practice are not easy to combine in real life situations. It is therefore important for business consultants to be familiar with the field within which they operate if they are to determine whether an action in ethical choices made by consultants is influenced by their values and ideas. Actions may or not coincide with professional norms. However, economic and political considerations may override commitments to ethical values and responsible behaviour, particularly in those situations where individual is placed under pressure, or exposed to a set of opportunistic circumstances. The study of Yang (2000) supported and acknowledged the conflict between theory and practice. The study explained that consultants who maintain high personal and professional values in theory disintegrate in practice through actual ethical dilemmas.

III. Previous studies on Professional Ethics

Professional ethics are embodied in codes of practice which defines the roles and responsibilities of professionals. These professionals are expected to be the upholders of these virtues otherwise known as professional ethics (Harris et al., 1995; Calhoun and Wolitzer, 2001). Codes of practice addresses client service delivery, qualifications (both academic and professional), standards of practice among construction professionals, Terrenzio (2004). Professionals must therefore adhere strictly to these standards when discharging their duties. There have been several criticisms about construction professionals concerning adherence to ethical standards. Integrity of construction professionals have been questioned with many empirical studies that emphasized practices such as illegal agreements between tenderers that resulted in seemingly competitive bids, price fixing, or market distribution schemes that circumvent the spirit of free competition and defraud clients, bid-cutting, bid-shopping, cover pricing, hidden fees and commissions and compensation for unsuccessful tenderers after consultation with other tenderers Ray et al, (1999), Zarkada-Fraser and Skitmore, (2000), Zarkada-Fraser (2000) and May et al., (2001)

The study of Shankatu (2003) on forms, susceptibility and possible solutions on corruption in the industry noted that uniqueness of many projects made costs difficult to compare. The study revealed the prevalence of uncovered unethical practices such as bad workmanship which may not be easily detected. Vee and Skitmore (2003) examined professional ethics in the construction industry. Findings from the study revealed that various unethical issues surrounding construction activities include unfair conduct, negligence, conflict of interest, collusive tendering, fraud, bribery and violation of environmental ethics among others. The study concluded that all participants, regardless of professional allegiance require a common understanding of ethical and professional values to move the construction industry forward.

Competence of professionals was assessed in the South African construction industry by Nkado (2000) and Poon (2004a). The study found out that the industry's performance cannot only be measured with respects to meeting clients demands through the dynamism of technical competencies and innovative skills only. The behavioural pattern of professionals to protect clients' interest and sustain public industry harmony should be looked into. This shows that the attitude, behaviour and integrity by which professionals' handle matters are quite observed by the public.

As an extension of Poon (2004) study, Pearl, Bowen and Makanjee (2005) examined professional ethics in the South African construction industry. The study observed that several unethical conducts and ethical dilemmas in the construction industry such as corruption, negligence, bribery, conflict of interest, cover pricing, front loading among others were rampant. The study established significant areas of concern pertaining to the practice of ethical conduct among construction professionals. The research further established that 79% of construction professionals were involved in unethical behaviour, which is on increasing trend with adequate means of curbing the practices yet unavailable. Hamzah, Saipo, Mohd, Mohammed and Yap (2007) examined professional ethics as it affects construction quality by investigating the relationship between professional ethics and construction quality in Malaysian construction industry. The study found out that unethical practices among professionals have direct

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negative consequences on the output of the construction industry. Despite the emphasis on the importance of ethical standards on the image of professionalism and practices of construction professionals, it appears little attention had been paid to examine the level of compliance of professionals to ethical standards in the Nigerian construction industry. Thus this research intends to fill this gap.

IV. Methodology

The study was conducted in Lagos State on the premise that 75% of construction firms in Nigeria are either based in Lagos States or have their branches located in Lagos (Fagbemi, 2008.) Data for the study were collected through one hundred and seventy (170) copies of questionnaire administered on the professionals in the Nigerian construction industry comprising architects, builders, quantity surveyors and engineers in this area. The choice of these core professionals as the target population was on the basis that these professionals are involved throughout the various stages of construction works. Also, they are involved in the procurement of building projects as established by Ameh and Odusami (2009).

Section A of the questionnaire consisted of the demographical information of the respondents, while section B focused on the study objectives. Fifteen (15) major ethical standards were identified from literature. Professionals ranked the level of compliance of professionals to these ethical standards, ranked themselves and also ranked their co-professionals on the level of compliance of professionals to ethical standards on a 5-point likert scale where 5=very high, 4=High, 3= Moderate, 2=Low and 1=very low. The overall level of compliance by professionals was rated from 0-10% to 91-100% where 0 is the lowest and 100 is the highest. A total of one hundred and thirty eight (138) questionnaire were retrieved which represents 81.18% response rate of the total 170 copies administered. Data collected were analysed using descriptive and inferential statistics which includes percentages, Mean Item Score (MIS) and Analysis of Variance (ANOVA). The results of the analysis are presented in tables below. Mean Item Score (MIS) was calculated from the formula given below:

$$\text{Mean} = \frac{5_{n5} + 4_{n4} + 3_{n3} + 2_{n2} + 1_{n1}}{(n_5 + n_4 + n_3 + n_2 + n_1}$$

Where,

n^5= number of respondents who picked 5
n^4= number of respondents who picked 4
n^3 =number of respondents who picked 3
n^2 = number of respondents who picked 2
n^1 = number of respondents who picked 1

V. Results and Discussion

Table 1 shows the type of organisation of the respondents. The result revealed that 24.27% are in the contracting firms, while 33.33% are in consulting firms while 34.78% are in the government organisations. This formed a good representation of construction industry stakeholders as their various wealth of experience at different sector will provide a reliable data for this study.

Table 1: Type of Organisation

Type of Organization	Frequency	Percentage (%)
Contracting	35	24.27
Consulting	46	33.33
Government	48	34.78
No response	9	6.52
Total	**138**	**100**

Table 2 shows the year of establishments of firms, the average years of establishments of these firms is approximately 19.06 years. The result showed that these professionals were experienced in construction activities, therefore their responses could be relied upon.

Table 2 : Year of Establishment of Firms

Years of Firms	Frequency	Mid-Point	Fx	Percentage(%)
0-10 years	28	**5**	140	20.28
11-20 years	37	**15.5**	573.5	26.81
21-30 years	29	**25.5**	739.5	21.01
31-40 years	5	**35.5**	177.5	3.62
40 -49 years	18	**44.5**	801	13.04
Above 50	4	**50**	200	2.89
No response	17	-	-	12.31
Total	**138**		**2,631.5**	**100**

Mean=19.06 years

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Table 3 presented the profession of the respondents. The result shows that 29.70% of the respondents are Architects, 18.10% are Builders, and 23.91% are Quantity Surveyors while only 28.26% are engineers. Responses from these different categories of professionals will assist this study to evaluate different perspectives of the professionals as regards ethical standards.

Table 3: Profession of the Respondents

Professional	Frequency	Percentage (%)
Architects	41	29.70
Builders	25	18.10
Quantity Surveyors	33	23.91
Engineers	39	28.26
Total	**138**	**100**

Table 4 shows the highest academic qualification of the respondents. The results indicated that 48.50% are holders of B. Sc/ B. Tech, 7.24% are holders of M. Sc, 2. 89% are holders of Ph.D. Only 8.69% are holders of PGD while 28.97% of the respondents had academic qualification not less than HND. From the results, 58.63% of the respondents had the minimum qualification of B. Sc/B. Tech. This indicated that the respondents had the required academic qualifications that could assist to provide a meaningful data from which inferences could be drawn for the study.

Table 4: Highest Academic Qualification of the Respondents

Professional Qualification	Frequency	Percentage (%)
OND	8	5.79
HND	32	23.18
B.Sc./B.Tech.	67	48.55
M.Sc.	10	7.24
Ph.D	4	2.89
PGD	12	8.69
No response	5	3.62
Total	**138**	**100.0**

Table 5 shows that 86. 16% of the respondents belong to various professional bodies in construction industry while only 13. 76% of the respondents were not professionally qualified. This shows the ability of these professionals to provide and supply reliable information for the study.

Table 5 : Professional Qualification of Respondents

Professional Qualification	Frequency	Percentage (%)
Nigerian Institute of Architects (NIA)	37	26.80
Nigerian Institute of Builders (NIOB)	22	15.90
Nigerian Institute of Quantity Surveyors (NIQS)	29	21.0
Nigerian Society of Engineers (NSE)	31	22.46
No response	19	13.76
Total	**138**	**100**

Table 6 shows the number of years of work experience of respondents. The results indicated that the respondents have mean of 20.9 years working experience. The professionals would have been exposed to various ethical issues in construction projects during this period. This implied that the respondents have adequate professional experiences to supply adequate and meaningful information for this study.

Table 6 : Respondents' Work Experience

Years	Frequency	Mid-Point	Fx	%
0-10 years	39	5.5	214.5	28.26
11-20 years	32	15.5	496	23.18
21-30 years	28	25.5	714	20.28
31-40 years	21	35.5	745.5	15.21
>40 years and above	18	40	720	13.04
Total	**138**	**122**	**2,890**	**100**

Mean=20.9

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Table 7 presented the nature of projects the respondents have undertaken during the course of their professional practices. The results indicated that 93.46% of the respondents have undertaken projects ranging from residential, commercial and engineering. This shows that the professionals must have accumulated wealth of experience based on their exposures to various practical ethical issues on the project, which would have being gathered both from the management and administration of projects. Therefore responses from these professionals could be relied upon in achieving the objectives of this study.

Table 7: Nature of Projects Executed by Respondents between 2001-2010

Nature of Projects	Frequency	Percentage (%)
Residential	46	33.33
Commercial	35	25.36
Educational	9	6.52
Engineering	25	18.11
Service installation (mechanical & electrical)	14	10.14
No response	9	6.52
Total	138	100.0

Table 8 shows the mean item score (MIS) for the level of compliance of ethical practices as perceived and ranked by each professional. From the result of the analysis, all the fifteen (15) ethical standards identified by the study were highly ranked with MIS ranged between 3.79≤ 2.93 which showed ranking above average. Three ethical standards were ranked 1st, 2nd, & 3rd that is client's service delivery, educational training and professional qualification and standards of practice respectively indicating client service delivery as the most significant ethical standard. The MIS ranking shows the ranking of Architects (MIS=3.79, Rank=1st); Builders (MIS=3.38, Rank=1st), Quantity surveyors (MIS=3.29, Rank=1st) and Engineers (Mean=3.22, Rank=1st). In construction works, architects prepare both the sketch and final drawings. They also have the general knowledge of planning, designing and oversight of a building construction. Simson and Atkins (2006) established that architects must have standard of care and should be responsible to the client by discovering and reporting works that are not in conformity to clients' taste. It is crystal clear that client service delivery is paramount in all professions. In most construction projects, architects are usually the clients' representatives to protect the clients' interest. Builders also ranked this ethical standard as 1st which shows they are also in agreement that client service delivery is very important for construction professionals. In most cases, builders are the contractors that execute construction projects. They are therefore liable and responsible to the clients directly. In all the stages of the contracts ranging from contract award, procurement of materials, site operations and up to completion, they should therefore ensure that clients receive value for the work paid for. The quantity surveyors were also in agreement to client service delivery as the first ethical standard that construction professionals should consider when performing their professional obligations. Quantity surveyors can either be working for the contractor or for the client organization. Whichever the case, they are saddled with the responsibilities of preparing the cost estimate of any proposed project, preparation of interim valuation and physical measurement of works to enable payment to the contractor etc. They are to monitor the clients' resources to ensure services are delivered with the best standards and at minimum cost which is the major service delivered by quantity surveyors.

The engineers ranking also supported other professionals ranking on client service delivery as one of the ethical standards professionals must comply with. Engineers are at the helm of providing the structural design details of the projects and thereby hold the duty of care to the client or whosoever appoints them. Jackson and Powell (1992) established that an engineer is a person in the engineering construction contract performing the same function as an architect under the traditional construction contract. The nature of their profession makes them to have direct impact on the lives of people, and as professionals must therefore owe special moral responsibilities John (1991). Due to their knowledge and importance in society, they should have standard of conducts to attend to all issues regarding the construction activities and thereby provide answers to ethical questions Belis and Impe (2001).

This shows that as much as engineer stays in the same role with the architects as a member of design team, they must be versatile, experienced, dynamic and well trained to be suitable for the diverse roles expected in the construction activities.

Also, they should adapt to the changing environment and client service delivery should be paramount to them. The results indicated that majority of the professionals have high level of compliance to this ethical standards. This shows the need for professionals in the construction industry to discharge their duties in a way to satisfy and protects the client's interest. This is contrary to the work of Yakub 2005; Masidah and Khairudeen (2005) which affirmed that professional

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services and opinions are under chronic criticism as they are mostly unnecessary and unsatisfactory.

The 2nd highly ranked ethical standards were educational and professional qualification. The MIS values are as follows: Architects (MIS=3.71, Rank=2nd), Builders (MIS = 3.26, Rank= 2nd), Quantity Surveyors (MIS = 3.24, Rank = 2nd) and Engineers (MIS = 3.18, Rank = 2nd). The MIS values of the four professionals ranged 3.71≦3.18. This shows a correlation in the ranking and a level of agreement in the professionals' opinion with respect to educational and professional qualification as one ofs the ethical standards the professionals must put into consideration. Architects ranked this ethical standard highest with MIS value (3.71), while other professionals' rankings were between 3.26 ≤ 3.18. This shows that Architects believed that educational training & professional qualification is a cogent criterion for professionals to dutifully discharge their professional duties. This result is expected because majorly in most of the construction sites, Architects are majorly the clients' representative or the site manager (lay men refers to architects as "site engineer"). Educational training is therefore needed to relate with other professionals and to communicate well with the semi-skilled artisans who might not understand the technical terms used on site. Generally, apart from the academic and professional training acquired while in school, some core values such as human relations are taught in tertiary institutions. These core values are equally important in all fields of learning to successfully relate with people from different families, cultural backgrounds and also to perform the expected roles by each professional.

The rankings by the Builders, Quantity Surveyors and Engineers were similar which shows their perceptions about educational training and professional qualifications as ethical standards are correlated. These rankings also supported that professionals should be academically and professionally qualified in their respective fields. Moreover, educational training and professional qualification is of great importance, because this is where professionals acquire academic training, technical competence and skills about a particular profession. It is therefore important for professionals to have sound educational background to be able to cope with the projects challenges. This finding conformed to Chan and Chan (2002) that professionals need to be placed in appropriate educational framework to ensure their continuous relevance. Professionals should only accept to offer services for which they are qualified by education, training and professional experience.

The third ranked ethical standard by the professionals is standard of service. This ethical standard was ranked 3rd by two professionals, that is Architects (MIS = 3.63, Ranking = 3rd) and Engineers (MIS = 3.16, Ranking =3rd). The rankings showed agreement between architects and engineers on standards of practice as the 3rd important ethical standards for professionals in discharging their duties. This correlation is not farfetched as their roles are interchangeable as earlier established. Therefore a level of agreement is expected in their responses, this established the fact that they have the same perception on the subject matter. Also, builders and quantity surveyors ranked standards of practice as the 4th ethical standards with MIS = 3.19 and 3.17 respectively. The closeness in their mean ranking could be interpreted that they share the same view on this ethical standard.

The Builders (as in most cases the contractors) believed that confidentiality was more important than standards of practice as it was ranked 3rd (MIS = 3.20). On the contrary, quantity surveyors ranked integrity as the 3rd (MIS=3.18) important ethical standards. Contractors' perspective on confidentiality is expected to be high as they are involved in several monetary issues which is the backbone of ethical issues in the construction industry. Money is a strong sager in construction industry and centres so much on the contractors, ranging from the pre-contract stage to post contract period. Contractors wish to win contract at all cost and also maximise profit as much as possible. In the quest to win at all cost, some contractors might engage in bid shopping from careless consultants so as to have an idea of the tender figures of other contractors, they also engage in front and back loading of items and rates in bills of quantities. All these acts are unethical standards with respect to confidentiality of information. The position of information confidentiality have been established by Vee and Skitmore (2003) that unless otherwise stated should a professional release public statements that are truthful and objective. Information and records that are confidential should be kept when appropriate. Improper information flow both internally and externally within should be discouraged.

Confidentiality as ranked 3rd by the Builders (contractors) cannot be compared with other professionals' ranking because contractors are not mostly professionals in quote. Architects ranked confidentiality 5th; Quantity Surveyors ranked it 6th while Engineers ranked it 9th. The view and perception of different professionals on each ethical standard are indicated and revealed in their respective rankings. Quantity Surveyors ranked integrity as the 3rd (MIS=3.39) significant ethical standard in the construction industry. Architects ranked it 4th, while Builders ranked 5th, and Engineers ranked it 6th. Quantity surveyors deals basically with financial management of the contracts and this is the area where the integrity of most professionals are put into the mud especially if there is a conflict between personal and professional values. The moral standing and upbringing of each individual professional appears on how they

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protect their own integrity in dealing with clients rather than being mindful of their personal gain.

In the case of safety as an ethical standard, Architect ranked it 8th (MIS=3.31), Builders ranked 10th (MIS = 3.07), Quantity surveyors ranked 11th (MIS=3.04) while engineers ranked 5th (MIS=3.04). The 5th ranking of safety by engineers shows they see safety both on human resources and equipment as core due to the technicalities involved in construction projects. This even manifested in the safety precautionary measures usually taken on construction sites to safeguard dangers and accidents such as wearing of helmet, restricting unnecessary visitation to site, employing safety/heath personnel among others. Little lapses could lead to great human and financial losses that might not be regained easily, and this will not be cost effective for the client. This is also manifested in engineers ranking of cost effective as 4th (MIS= 3.06) most significant ethical standard. Architect ranked 11th (MIS = 3.27), Builders ranked 8th (MIS= 3.14) and quantity surveyors ranked 7th (MIS=3.12).

Table 8 showed, the overall rating of professionals regarding ethical standards. Standards of practice (MIS=2.73) was ranked 1st, educational & professional qualification and clients service delivery (MIS=2.71) were both ranked 2nd, while clients service delivery & professional development were both ranked 4th. The least ranked was fair compensation (MIS=2.46), which indicated that these ethical standards are important for professionals in their professional services.

The overall rating of all the professionals also corroborated the importance of these ethical standards for professionals to discharge their duties with greatest professionalism and integrity. Quality services are expected by the clients for all the services paid for. The professionals should therefore note that good value for money is of utmost importance. Furthermore, clients create markets for the construction industry, and so should be placed at the centre of the construction process as established by Latham (1994); Langford and Male (2001). Professionals should clearly define project performance in the services they render as the achievement of fitness-for-purpose in construction and also as the absolute realization of the client's satisfaction of his requirements as established by Male and Mitrovic (2005). In addition to this, the findings also corroborated Cardammone (2011) that established that professionals are linked with notion of services they provide. Professionals should therefore focus more on their personal professional development so as to provide services that are of high quality for all that needed their services.

Table 8 : Level of Compliance of Professionals to Ethical Standards

Ethical Standards	Arc.		Bldr.(Cont)		QS		Engr.		All Professionals	
	Mn.	Rk	Mn.	Rk.	Mn.	Rk	Mn.	Rk	Mn.	Rk.
Standards of practice	3.63	3	3.19	4	3.17	4	3.16	3	2.73	1
Education& Professional Qualification	3.71	**2**	3.26	**2**	3.24	**2**	3.18	**2**	2.71	2
Safety	3.31	8	3.07	10	3.04	11	3.04	5	2.71	2
Clients' Service Delivery	3.79	**1**	3.38	**1**	3.29	**1**	3.22	**1**	2.68	4
Professional Development	3.36	5	3.16	6	3.15	5	3.03	6	2.68	4
Integrity	3.39	4	3.17	5	3.18	3	3.03	6	2.64	6
Sustainability	3.25	12	3.06	11	3.00	13	3.03	6	2.63	7
Confidentiality of information	3.36	5	3.20	3	3.14	6	2.97	9	2.62	8
Environmental Friendliness	3.30	9	3.03	13	3.02	12	3.03	6	2.60	9
Cost Effectiveness	3.27	11	3.14	8	3.12	7	3.06	4	2.58	10
Fair Competition	3.35	7	3.09	9	3.10	8	3.03	6	2.58	10
Maintenance Culture	3.25	12	3.03	13	3.01	9	3.00	8	2.56	12
Public Welfare	3.24	14	3.05	12	2.98	14	3.02	7	2.54	13
Conflict of Interest	3.29	10	3.16	6	3.01	9	2.98	10	2.50	14
Fair Compensation	3.23	15	3.03	13	2.96	15	2.93	11	2.46	15

Source: Authors Survey 2012

Legend
Rk. : Ranking
Mn. :Mean
Arc: Architects
Bldr: Builder
Cont: Contractor
QS: Quantity Surveyors
Engr: Engineer

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Table 9 : ANOVA Test of Level of Significance of Ethical Standards

Ethical Standards	ANOVA		Overall Rating of Professionals
	F – Value	P- Value	%
Standards of practice	0.431	0.882	54.76
Educational& professional qualification	1.824	0.084	54.33
Safety	1.193	0.307	54.03
Clients' service delivery	2.447	**0.020***	53.73
Professional development	3.774	**0.001***	53.61
Integrity	2.146	0.400	52.83
Sustainability	1.475	0.177	52.79
Confidentiality of information	1.707	0.108	52.45
Environmental friendliness	1.422	0.197	52.10
Cost effectiveness	1.184	0.313	51.72
Fair competition	1.686	0.113	51.63
Maintenance culture	0.351	0.929	51.29
Public welfare	0.779	0.630	50.94
Conflict of interest	1.024	0.415	50.04
Fair compensation	1.561	0.148	49.31

Source: Authors Survey 2012

Significant at P≤0.05

$$\text{Mean} = \frac{54.76 + 54.33 + 54.03 + 53.73 + 53.61 + 52.83 + 52.79 + 52.45 + 52.10 + 51.72 + 51.63 + 51.29 + 50.94 + 50.04 + 49.31}{15}$$

$$\text{Mean: Level of compliance} = \frac{785.56}{15}$$

$$= 52.37\%$$

VI. Research Hypothesis: Anova Test

In order to determine the professionals' perception on the level of compliance to ethical standards identified in this study, two hypotheses were drawn below;

H0: There is no statistically significant difference in professionals' perception of the level of all professionals' compliance to ethical practices.

H1: There is statistically significant difference in professionals' perception of the level of all professionals' compliance to ethical practices.

The hypothesis was tested using ANOVA. The results showed that, only two (2) out of all the fifteen (15) ethical standards were significant, which indicated a different opinion on the two ethical standards with P value < 0.05).The two ethical standards were clients service delivery (F value=2.447, P value=0.020) and professional development (F value=3.774, P value = 0.001). This implies that the null hypothesis could not be accepted. The result established a statistically significant difference between all the professionals view about compliance of all the professionals to these two ethical standards. It means all the professionals were of the opinion that the entire professionals have different views and perception to compliance. While some professionals believed that some ethical standards were significant, other professionals are of the opinion that other elements are more important and significant than others.

From Table 9, the result showed the overall general rating of all professionals, as rated by the professionals themselves in percentages (0% - 100%). The percentage rating of respondents ranged from 49.30% ≤ 54.70%, which indicated that professionals ranked themselves on average. It can therefore be concluded that the professionals have average of 52.37% level of compliance to all ethical standards identified by the study. From this result, there is an indication that professionals in the industry know the importance of conformity with ethical standards. The construction industry in Nigeria is gradually coming up to change the perception of the public against the notion that the construction industry is the most corrupt industry due to high frequency of construction failures that have challenged the integrity of the professionals in the sector as asserted by Nduese (2010). Improving compliance to the ethical standard of the industry would not only come from individual professional and the industry, but would also require inputs from governments as opined by John(2006) that governments have responsibilities in ethical matters relating to the construction industry

VII. Conclusion and Recommendation

This study appraised the compliance of construction professionals to ethical standards in the Nigerian construction industry. The study concluded that clients service delivery; educational training and professional qualification as well as standards of practices are the most significant ethical standards among construction professionals in Nigeria. The ethical standards that had the least professionals' compliance was fair compensation. The study recommended that

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professionals should pay more attention to all ethical standards in the industry while discharging their duties to satisfy clients. If professionals continually uphold ethical standards, the perception of the public about the image of the construction industry would be changed and project performance and delivery be enhanced.

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