

PROFESSIONAL ETHICAL PRACTICES TOWARDS BUILDING PERFORMANCE: A PRIMER

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Abstract: Construction industry is significant to sustainable and socio-economic development of both developed and developing countries with construction output directly related to national output. However, building performance in terms of quality is low; just as building construction in Nigeria is characterized by poor quality and incessant collapse caused by poor management processes and unethical practices. One of the factors affecting building performance adversely is poor construction management; poor project management in construction industry involves: 1) competency of project manager and team members'; and 2) factors related to the project. This poor construction management invariably results to poor construction project quality. Another negative factor confronting building performance quality is unethical practices; unethical practices in construction industry include lack of standard services, lawlessness, dishonesty, irresponsibility and lack of accountability. Introduced in this paper are ethical practices in building construction that affect building performance. This paper offers clarity on the mediating effects of ethical practices on the relationship between the dependent variables and the independent variable in construction industry to improve building performance quality in Nigeria.

Keywords: Nigeria, Construction industry, Building performance, Project management, Quality, Questionnaire.

1. INTRODUCTION

According to Odediran et al. (2012), in Nigeria, construction industry is responsible for almost 70% of the nation's fixed capital formation, 1.4% GDP and offered employment to approximately 8 million people, which make up approximately 25% of Nigeria's manpower and the largest employer of construction labour in Africa (Ibrahim & Musa- Haddary, 2010). Construction industry is significant to sustainable and socio-economic development of both developed and developing countries. Furthermore, construction output is directly related to national output (Ali, Shahir and Bin, 2014).

However, building performance in terms of quality is low. One of the factors affecting construction industry adversely is poor construction project management. Sanjuan and Froese (2013) posit that government agencies and companies in USA losses about \$150 billion annually due to poor construction project management practices. Furthermore, poor construction project management cost Canadian public construction project alone about \$97 billion dollars per annum (Flyvbjerg, Skamris & Buhl, 2002; Sanjuan & Froese, 2013). According to Oyedele et al. (2015), negative effect of poor construction quality is more in developing countries. Thus, negative effects of poor construction quality and project management are more in developing countries.

Poor project management in construction industry involves poor project initiation, lack of planning, poor execution, inadequate and efficient monitoring and control and poor evaluation of project progress and closure. Poor construction project management results to poor construction project quality. Mahamid (2016) posits that a poor construction project management results to poor construction project quality vis-a-vis good construction project management improves building performance quality.

Another negative factor confronting building performance is unethical practices. Unethical practices in construction industry include lack of standard services, lawlessness, dishonesty, irresponsibility and lack of accountability (Vee & Skitmore, 2003; Osei-Tutu, Badu & Owusu-Manu, 2009; Ede, 2010; Rahman et al., 2010; Oyewobi, Ganiyu & Oke, 2011; Chendo & Obi, 2015; and Oloke, Ogunde & Joshua, 2017) Furthermore, unethical practices influence building poor quality.

However, to improve building performance in construction industry, Project Management Institute (PMI) introduced standard construction project management processes (PMI, 2004, 2013; Sanjuan & Froese, 2013). Improved quality of construction project is one of the major indicators for construction project performance (PMI, 2004; Sanjuan & Froese, 2013; Mahamid, 2016). The standard project management process established by Project Management Institute consists of three management process groups which include (1) project manager and team members' competency and (3) project related factors.

Moreover, International Ethics Standards Coalition (2016) published ethical standards that can improve ethical behavior and improve building quality. According to Adul-rahman, Wang & Yap (2010) and Hornstein (2015), human factor is responsible for majority of building project quality-related issue. The ethical standards published by International Ethics Standards (IES) include standard service, lawfulness, transparency, honesty, responsibility and accountability.

The problem of poor building performance is critical and need urgent attention because industry that deals in construction is critical to the economic advancement of countries all over the world, especially developing countries. Research aim at improving construction quality in developing countries are limited (Oyedele et al., 2015). Therefore, this paper is important and timely as it introduced the professional ethical practices needed in building construction for the overall improvement of building performance and thus limit frequent building collapses in Nigeria and other developing countries generally.

2. DESCRIPTION OF CONCEPTS OF PROJECT MANAGEMENT

This section seeks to review relevant literature for the purpose of understanding effects of project management process on building construction quality through mediating role of professional ethical practices.

2.1 Project

Project is being carried out by people, held back by limited resources with a well-planned, executable and controllable approach. Also, a project is a not a permanent endeavour, and it is undertaken to create an unequaled service. It is not permanent in the sense that every project has explicit beginning and explicit ending and also explicit in the sense that the product or service is different in some special way from all similar product or services. Projects are always vital methods/mechanisms of performing and achieving organizations' business strategy (Arto, 2002, Wideman 2002).

2.1.1 Project Management

The concept of project management (PM) originated from US defense aerospace in 1953 (Hornstein, 2015). PM is critical and well recognized in construction industry (Sanjuan & Froese, 2013). The essence of project management is to initiate, plan, execute, monitor, control and close project to achieve the desire objective efficiently and effectively through competency of project manager; competency of project team members'; and factors related to project. This is known as standard project management process (Truman & King, 2018). Furthermore, project management objective is attained by application and integration of project management process. Project manager is saddled with the responsibility of achieving project objectives. Project management is further defined by different authors in different ways (Najmi, 2011; Yimam, 2011; Hornstein, 2015). The different definitions emphasize on different aspects of project management. Table 2.1 presents project management definitions by various scholars.

Table 2.1: Definitions of Project Management

Source	Definition
Chartered Institute of Building, 2002; Carmichael, 2004; Fewings, 2005; Yimam, 2011	Project management is the application and integration of knowledge, competency, skills, techniques and tools to overall initiating, planning, coordinating, directing, monitoring and control of a project from inception to completion. It also involves motivation of stakeholders to achieve performance in terms of cost, time and quality.
Kerzner, 2006	Project management is initiating, planning, coordinating, directing, monitoring and controlling of resources for short-term objective that has been established to complete specific goals and objectives.
Ali, 2010	Project management involve planning, organising, monitoring and control of various aspects of a project. It's also a motivation for stakeholders involved to attain project safety objectives within the agreed cost, time and performance criteria.
Najmi, 2011	Project management is the use of resources in any organisation for project activities to achieve targeted cost, time and quality.
Project Management Institute (PMI), 2013; Hornstein, 2015; Truman and King, 2018	Project management is the application of knowledge, competency, skills, tools, techniques and activities to meet project needs.

Source: Project Management Institute (2004, 2013, 2019); Kerzner (2006); Ali (2010); Yimam (2011); Najmi (2011); Hornstein (2015); and Truman and King (2018)

As stated earlier and presented in table 2.1, several project management definitions exist. The definitions are based on individual and institutional concept. However, the definitions emphasized on project management as means for attaining project objectives in respect to cost, time, and quality. This study follows the project management definitions by Project Management Institute (PMI) as the definition addresses project management holistically. PMI defines PM as “the application of knowledge, skills, tools and techniques to project activities to meet project requirements”. This definition recognizes that PM involved processes and emphasized on project quality as an objective.

2.1.2 Critical Success Factors

The concept of Critical Success Factors (CSFs) could be defined as the term for vital element that is necessary for an organization to achieve its objectives. It is a vital factor require for ensuring the success of any organization. According to Rockart (1981), CSFs are the elements that must go finely to ensure the success for any organization. He further added that CSFs represent those managerial inputs that special and continual attention must be given to in order improve targeted performance.

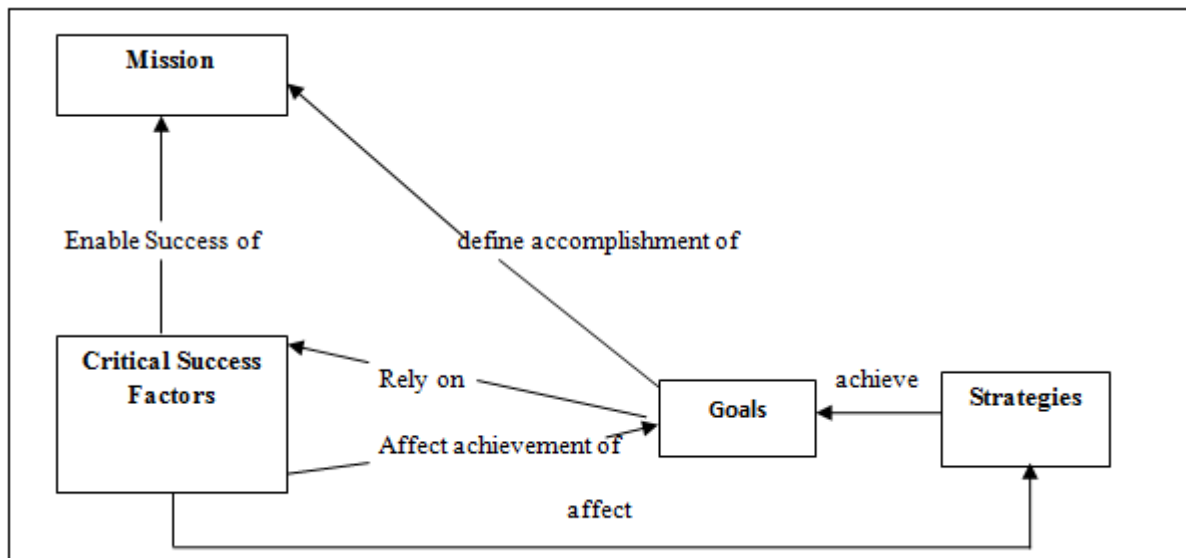


Figure 2.1: CSFs Relationships to an Organization's Mission and Goals (Nifa et al., 2013)

2.2 Ethical Practices in Construction Industry

Ethics is fundamental for every performing business and industry (Valtonen & Nousiainen, 2005; Kang, Price, Thorpe & Edum-Fotwe, 2004). Thus, ethical practices can improve PM process and building construction quality. Dindi (2016) and Abdul-rahman, Wang and Yap (2010) posit that ethics is critical for construction industry performance. In literature, there is no generally accepted definition of ethical behavior (Ho, 2011; Valtonen & Nousiainen, 2005). According to Ho (2011) ethical behaviour is morally and legally accepted behaviour in the society. Also, Valtonen and Nousiainen (2005) define ethical behaviour as morally right or good behaviour. Ethical behaviour is behaviour that conforms to personal, professional, organizational and societal value (Navran, 1992; Jones, 1991).

Ethical practices in construction industry are viewed from different perspectives by different scholars (Dindi, 2016). There are three main perspectives of ethical practices in construction industry. The three main perspectives are: (1) management/business ethics, (2) professional ethics and (3) personal ethics. Management/business ethics is expected behaviour of an individual guided by management or business principles in an industry or group in an industry (Ho, 2011). For example, Ho (2011) reviewed management ethic theories in construction industry. Professional ethic is expected behaviour of an individual guided by set of principles of professional practice in an industry or group in an industry (Dindi, 2016; Vee & Skitmore, 2003). For instance, Vee and Skitmore (2003) study professional ethic in Australian industry of construction. Also, Abdul-rahman, Wang and Yap (2010) study the impact of professional ethics on construction quality in developing country. Personal ethic is moral principles or behaviour of individual that is guided by personal decision (Dindi, 2016). Also, Dindi (2016) study personal ethic in Kenyan construction industry. This study focuses on professional ethic as mediating variable to strengthen the relationship between project management process and building construction quality.

Different industry/organization has different ethical standards purposely for the improvement of performance. In order to improve construction quality/performance, International Ethics Standards (IES) (2016) published ethical standards. The ethical standards published by IES are: (1) standard service, (2) lawfulness, (3) transparency, (4) honesty, (5) responsibility and (6) accountability.

In addition, several definitions of ethical practice exist however, all the definition emphasised on right and good behaviour in an organisation or society. This study follows the definition of ethical behaviour by Navran (1992) and Jones (1991). Thus, this study defines ethical behaviour in construction as behaviour that conforms to professional and construction values in construction industry that can improve construction quality. Furthermore, the study intends to employ the ethical principles published by International Ethics Standards (2016) as mediating variables between project

management processes and building construction quality. Table 2.2 presents ethical principles published by International Ethics Standards (IES) (2016) and as employed by other scholars in construction project.

Table 2.2: Ethical Standard Principles

Ethical Principles	Veve & Skitmore (2003)	Kang, Price, Thorpe & Edum-Fotwe (2004)	Abdul-Rahman, Wang & Yap (2010)	International Ethics Standards (2016)
Standard service	√		√	√
Lawfulness	√			√
Transparency	√	√	√	√
Honesty	√	√	√	√
Responsibility	√	√	√	√
Accountability	√	√	√	√

Source: Vee and Skitmore (2003); Kang, Price, Thorpe and Edum-Fotwe (2004); Abdul-rahman, Wang and Yap (2010); and International Ethics Standards (2016)

2.3 Ethical Practices in Nigerian Industry of Construction

Professional ethical practices in industry of construction form the foundation upon which the construction industry can improve its quality (Abdul-rahman, Yang & Yap, 2010; and Dindi, 2016). Culture of professional ethic practices anchored on the principles of standard service, lawfulness, transparency, honesty, responsibility and accountability (International Ethics Standard, 2016). Thus, to improve building quality, it is vital to implement and observe professional ethical standards.

2.3.1 Standard Service: Standard service is required from construction professionals for qualitative building performance. Standard service required qualified workforce, willingness to execute standard construction work and standard materials. Adebayo (2000) opined that building projects gain trust when the building designer or the foreman demonstrates competence as reflected on their work which is commensurate with the amount of payment for their services. Contractors must utilize quality building materials according to specifications, while the site manager should strictly implement quality requirements required of workers. Windapo (2006) and Dada (2006) attributed the collapse of various structures in Nigeria to the ignorance of building managers and the lack of awareness among construction professionals in the proper management of construction projects.

Shola (2002) argued that incessant building collapses in Nigeria is caused by employing unqualified professionals and workforce. Some potential building owners tend to avoid the qualified professionals because of unwillingness to pay consultancy fees. Instead, the potential builders would seek the services of quacks that are willing to accept lesser/reduced fees. The designs by these quacks are usually approved by the local planning authorities who are believed to be in collusion with the quacks. Whenever an accident happens on site, the customer blames the consultants and the contractors. It is apparent that customers' common attitude to cut corners is one of the problems that impact building process.

Adebayo (2000) suggested that the knowledge, competency, skills, experience and personal ability of construction professionals are necessary to ensure building integrity. It should be noted that during construction, many contractors, either on the directive of their clients/builders or in a bid to cut corners to maximize profit, alter approved building plans without a conforming to approved structural drawings to the detriment of the structure.

2.3.2 Lawfulness: Compliance with environmental and professional laws is critical to improve construction project. Thus, contractors should adhere to environmental and professional law for qualitative construction project. Building Regulation Act implies that all the rules that associate specifically with control of the construction of structures (Fagbenle & Oluwunmi, 2010). Fagbenle & Oluwunmi (2010) posit that prevailing regulation should be supported with mechanism to guarantee compliance as average civilian only observe laws that are obligatory.

Femi (2014) asserts that several defects in the buildings occur due to non-compliance with the specification by the civil engineers. Furthermore, non-compliance with appropriate construction codes and building standards are also made by the builders which are evident from the construction defects. In addition to this, He stated that a very good construction project lays down all the processes that should be adhered to evade erroneous blunder during the building of a project.

However, some contractors choose to use their specific experience as an alternative to the specification offered. Chendo and Obi (2015) corroborated the issue of non-compliance with the existing laws in Nigeria stating that a four-storey building under construction at Agbama Estate, Umuahia also collapsed.

2.3.3 Transparency: Transparency known as one of the practical measures used to curtail corruption in industry of construction (Park & Blekinsopp, 2011). Transparency initiatives are critical elements of the primary approaches by government to encourage transparency and mitigate corruption or corrupt practices (Bertot *et al*, 2010). It is also about unselfishly willing to share with others information of government decisions, activities, good record management and access to information that are significant to all sections of society (Armstrong, 2005). According to Kolstad and Wiig (2008), there is a connection between high levels of corruption and not being transparent. A higher level of openness in decision-making raises the probability that corruption and wrongdoing is detected (Bac, 2001).

2.3.4 Honesty: The industry of construction main thrust is to provide value for the client through good delivery of service that is grounded on ethical standards exhibited by the professionals in the construction industry. The industry of construction has key obligation of shaping national growth through the supply of resource employment, manpower growth, infrastructure, fixed capital formation and betterment of the gross domestic product (Omole, 2000; Hillebrandt, 2000). Considering this, hence, it is expected that construction professionals should carry out their duties with utmost abidance to professional ethical standards, or to be honest in their dealings with clients and other stakeholders.

Honesty is a rare virtue especially in the construction industry where knavery and lack of fair conduct mostly occur at the very important phases (Alutu, 2007). Bowen et al. (2007) analysed primary opinions on knavery and unethical behaviour from key stakeholders in construction projects such as: 1) architects have the notion that contractors are knavery on matters relating to contractual specifications; 2) contractors have the notion that the tendering adjudication process is unjust and whenever clients step in, in the process of construction, there exist a prejudice in professionals' acts; 3) quantity surveyors on their part have the notion that contractors always repeatedly lay claim in the project construction phase.

2.3.5 Responsibility: Ethical responsibilities are the duties owe all stakeholders in the industry of construction by the companies in Nigeria, and not just financial supporters or investors. Building professionals can encourage the value of ethical responsibility by demoing how they should be responsible to any consequences to the building and its integrity. Ethical responsibility can be incorporated into sustainability initiatives in the accomplishment of better building quality as well as ameliorated productivity, good corporate governance, and ameliorated stakeholders' relations and reduced accident/incident rate.

2.3.6 Accountability: Accountability simply refers to the accountability and openness of government, organisations and its employees to the public. Unless the security of the country is involved, records of government activities should be accessible to the people (Bovens, 2007). The state of public accountability in Nigeria is a form of grandiosity, in such a manner that the more attention is given to it, the more worrisome it becomes (Thovoethin, 2003). In recent years, however, the country has implemented stricter rules for government and organisational projects to ensure accountability. For example, open tendering methods are used where government projects are announced on government portals, giving room for accountability and removing the burden of biases as might be brought where selected list is drawn up. After collection from all the respondents to a pre-qualification advertisement, a committee called Tender Evaluation (TEC) shall analyze the return based on the following criteria: (1) evidence of incorporation, (2) company's audited accounts for 3 years, (3) tax clearance evidence for 3 years, (4) financial capabilities evidence and/ or banking support, (5) records of previous projects and (6) experience and technical qualification of key personnel.

2.4 Ethical Practices and Building Performance

According to Valtonen and Nousiainen (2005) ethic is very important in construction however, there is limited literature. Studies have affirmed that ethical practice influences building construction quality (Rahman et al., 2007; Abdul-rahman, Wang & Yap, 2010; Dindi, 2016) Ethical practices in building construction form the basis for improved quality of building performance. Thus, a culture of good ethical practices is critical for qualitative building performance.

Abdul-rahman, Wang & Yap (2010) stated that issues related to quality are mainly influenced by factor that has to do with human. Abdul-rahman, Wang & Yap (2010) who studied the effect of professional ethic on construction quality in

Malaysia posit that ethical practices positively influence building quality in Malaysia. Furthermore, ethical practices are precondition for acceptable and sustainable building performance quality. Their study employed questionnaire survey. Thus, questionnaire was administered on professionals/managers and found that professional ethics has positive relationship with building performance. Thus, good ethical practices improve building construction quality. Quality depends on ethical behaviour (Besterfield *et al.*, 2003). According to them good ethic means good moral principle and when there is good moral principle, customers are satisfied through improved quality. Also, Valtonen and Nousiainen (2005) studied ethical principles in Finland construction and estate business and posit that ethical principles influence construction quality. In addition, Vee and Skitmore (2003) studied professional ethic in Australian industry of construction and affirmed that ethical practices has correlation with construction quality. Their study employed questionnaire survey for data collection. Dindi (2016) affirmed that human factor plays an important role on building construction quality. The study focuses on personal ethic in Kenyan construction industry and affirmed that personal ethic has direct relationship with building construction quality. Adnan *et al.* (2012) posit that unethical practices result to building construction poor outcome while ethical practices engender qualitative building construction outcome. Their study focuses on ethic in construction industry from contractor’s perspective. Although studies have shown that ethical practices improve construction quality, the studies do not state the types of ethical practices that improve construction quality.

Several ethical principles exist to promote construction performace in general, as a result of the importance of ethical practices in construction,. These ethical principles are established by both government authorities and professional bodies locally and internationally. The ethical principle published by international ethics standards includes include: standard service, lawfulness, transparency, honesty, responsibility and accountability. Employing ethical practices as mediating variable will strengthen the relationship between project management process and building construction quality because project management processes are carried out by human being and their ethical behaviour influences the process and building construction quality.

3. BUILDING PERFORMANCE INSTRUMENT

Evaluated under this section are project management process assessment instrument, professional ethical practices assessment instrument, and building construction quality assessment instrument among others.

3.1 Project Management Process Assessment Instrument (PMPAI)

Project management process instrument evaluated project management process practice on five dimensions which includes initiating, planning, executing, monitoring and control and close. Each question (questionnaire) is graded using a 5-point Likert scale, ranging from 1 = strongly disagree to 5 = strongly agree. A higher score indicated a greater affinity for associated dimension of project management process practice (Table 3.1). The project management process practice variables are assessed by total average score of the thirty two (32) items on PMPAI. A higher total project management process practice score indicates a greater affinity for project management practice.

Table 3.1: Project Management Practice Assessment Instrument (PMPAI)

1. Project Manager and Team Members’ Competency
1. Project Manager and Team Members’ experience is required during building construction plan and execution during building construction.
2. Project Manager and Team Members’ authority is critical in building construction project.
3. Project Manager and Team Members’ technical capability plan is critical in building construction project.
4. Project Manager and Team Members’ leadership and skills is critical for building construction.
5. Project Manager and Team Members’ commitment is essential in building construction.
6. Project Manager and Team Members’ adaptability to changes is essential in building construction.
7. Project Manager and Team Members’ planning of construction activities is essential in building construction.
8. Project Manager and Team Members’ competency is critical for quality planning in building construction.
9. Above processes improve building construction quality in Nigeria.

2. Project Related Factors
1. Initiating process as the beginning phase is essential in building construction.
2. Planning effort is essential in building construction project.
3. Monitoring and Control mechanism effort is essential in building construction.
4. Communication system effectiveness is essential in building construction.
5. Coordination effectiveness is critical to building construction.
6. Directing and managing project during execution is essential in building construction.
7. Performing quality assurance is essential in building construction project.
8. Information distribution is critical during building construction project execution.
9. Requesting for sellers and suppliers' responses is critical for building construction project.
10. Selection of seller and suppliers is integral part of building construction project.
11. Formal dispute resolution process can improve building construction quality.
12. Incentives on every successful construction project can improve building construction quality.
13. Project close and delivery handover system is critical to building construction project.
14. Project execution processes above can improve quality of building construction in Nigeria.

Source: Adapted from Belassi & Tukul (1996); Ali (2010); Nifa et al. (2013)

3.2 Ethical Practices Assessment Instrument (EPAI)

Ethical Practices Assessment Instrument (EPAI) is theoretically based on the International Ethics Standards to improve ethical practices in construction, land, infrastructure, property and other related professions (International Ethics Standards, 2016). The ethical standards have been employed by previous researches before its establishment by international ethics standards (2016). For example, Vee and Skitmore (2003) employed professional ethic to study construction industry in Australia.

Ethical practices include standard service, lawfulness, transparency, honesty, responsibility and accountability. Ethic practices served as the mediator. The various questions in EPAI determine whether construction industry professional ethic practices is in line with the international standard. Each question in EPAI is graded with a Likert-type scale ranging from 1 = strongly disagree to 5 = strongly agree (see Table 3.2). The highest average score of ethical practice is considered the dominant ethical practices.

Table 3.2: Ethical Practices Assessment Instrument (EPAI)

1. Standard Service
1. Professionals in building construction provide services based on their competency.
2. Building construction professionals provide only services which they are qualified to do.
3. Building construction professionals provide reliable leadership and skills for colleagues or teams.
4. Building construction professionals ensure that employees or associates employed are competent for the services/roles given to them.
5. Government provides enabling environment for standard practice in construction industry in Nigeria.
6. The above ethical standard services can improve building construction quality.
2. Lawfulness
1. There are established laws by government guiding professional practice in construction industry in Nigeria.
2. Building construction professionals applies applicable laws to discipline their errant members.
3. Building construction professionals observe international laws applicable in discharging their professional duties.
4. Building construction professionals observe environmental laws applicable in discharging their professional duties.
5. The above ethical lawful practices can improve building construction quality.
3. Transparency
1. Building construction professionals are to be open and accessible in the discharge of their professional duties.
2. Building construction professionals are act without misleading or attempt to mislead in the act of proving services.

<p>3. Professional ethics demand that building construction professionals are not to withhold information or misinformed in respect of their services.</p> <p>4. Professional ethics demand that building construction professionals are to presents relevant documents or materials in a plain and intelligible language.</p> <p>5. Above ethical transparent practices can improve building construction quality.</p>
<p>4. Honesty</p> <p>1. In building construction, professionals act with integrity.</p> <p>2. Building construction professionals act in fairness.</p> <p>3. Building construction professionals advice based on its relevant, valid and objective evidence.</p> <p>4. Above ethical honest practices can improve building construction quality.</p>
<p>5. Responsibility</p> <p>1. Building construction ethics demand that professionals be transparent, truthful and trustworthy in all financial dealings in discharging their duties.</p> <p>2. It is ethical for building construction professionals to take full responsibility for services provided.</p> <p>3. Above ethical practices can improve building construction quality.</p>
<p>6. Accountability</p> <p>1. Building construction professionals are to be accountable financially.</p> <p>2. Building construction professionals are to be accountable materially.</p> <p>3. Building construction professionals are to be accountable for all services rendered.</p> <p>4. Above professional ethics about accountability can improve building construction quality.</p>

Source: Vee and Skitmore (2003); International Ethics Standards (2016)

3.3 Building Performance Assessment Instrument (BPAI)

Quality is one of the essential knowledge areas in project management body of knowledge (Truman & King, 2018). Project management body of knowledge (PMBOK) separate PM function into nine knowledge areas and addition of four more areas by construction extensions which are particular to construction industry (Truman & King, 2018). Each of the knowledge area is achieved by the five PM processes. Several researches have employed questionnaire to assess construction quality for the purpose of construction performance. For example, Abdul-rahman et al. (2010) study the impact of professional ethic on construction quality in Malaysia. Also, Oyedele et al. (2015) study the factors that influence construction quality from Nigerian perspective. Construction quality is measured by using construction quality instrument developed by Abdul-rahman et al. (2010) and Oyedele (2015). Each question in construction quality assessment instrument is graded with a Likert-type scale ranging from 1 = strongly disagree to 5 = strongly agree (Table 3.3).

Table 3.3: Building Performance Assessment Instrument (BPAI)

<p>Building Performance</p> <p>1. Project Management processes can improve Building performance.</p> <p>2. Project Manager Competency can improve Building performance.</p> <p>3. Project Team Members Competency can improve Building performance.</p> <p>4. Project Related Factors are critical to improve Building performance.</p> <p>5. Construction ethical practices can improve Building performance.</p> <p>6. All the above factors relates to Quality planning and assurance that can improve Building performance.</p> <p>7. Quality assurance routine can improve Building performance.</p> <p>8. Quality control can improve Building performance.</p>
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Source: Adapted from Abdul-rahman *et al.* (2010); Oyedele et al. (2015)

3.4 Theoretical Framework

According to Sekaran (2005) theoretical framework illustrates relationship between dependent and independent variables. Hence, the proposed framework for this study consists of three independent variables and one dependent variable. The independent variables are project manager competency, project team members' competency and project related factors. While the dependent variable is project performance. Figure. 3.1 shows conceptual framework on the mediating effect of ethical practices on building performance in Lagos State of Nigeria.

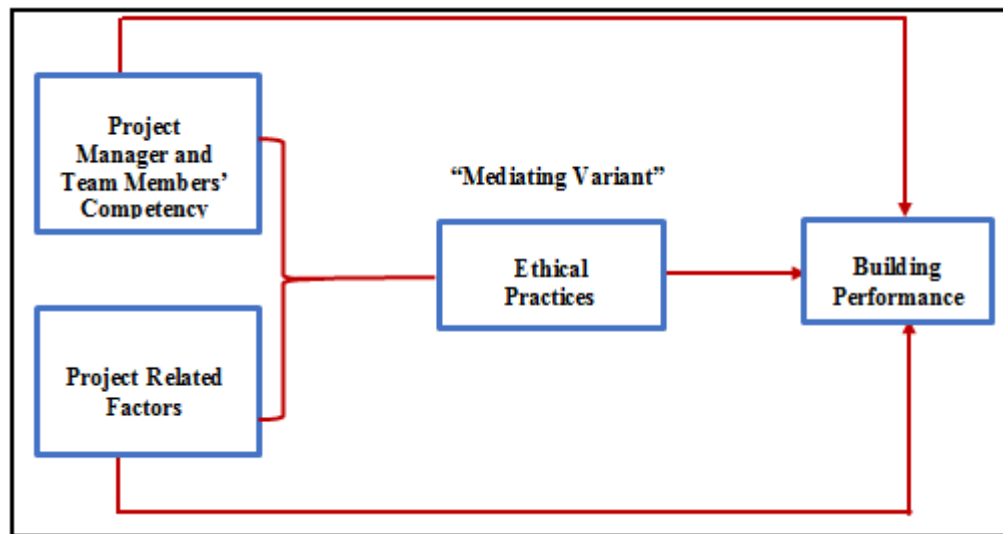


Figure 3.1: Proposed Research Theoretical Framework on the Effects of Project Management Factors and Ethical Practices towards Building Performance in Lagos State of Nigeria State of Nigeria

Source: Adapted from Belassi & Tukel (1996); Ali (2010); Nifa et al. (2013)

3.5 Pre-test

The aim for conducting a pre-test is to verify the reliability and validity of any research. The validity of the measuring instrument refers to the degree to which the measuring item is supposed to be measured, while the reliability of a measure represents the degree to which a measuring instrument is error free and remains consistent and stable across time and across various items in the scale (Sekaran & Boudie, 2013; Ibrahim, 2017). Thus, establishing the validity and reliability of the survey instrument is important before it could be used in order to be free from bias and distortion. Validity and reliability are nonetheless, the two frequently used concepts in the measurement and evaluation of constructs and are significant for defining and measuring prejudice and deformation (Crocker, Algina & Smith, 1987; Thanasegaran, 2009).

3.6 Validity of Research Instrument

Content validity measures how well a concept is represented by the items in the questionnaire (Virgiyanti, 2014). Experts in the field of project management, construction management, professional ethics and performance research will validate and verify the questionnaire before the actual test.

3.7 Reliability of Research Instrument

According to Pallant, (2010) and Virgiyanti (2014) reliability is a measure of the consistency of instruments when used at different point in time. Hence, a reliable instrument must measure the same parameter over time. This reflects the extent of homogeneity of the question's items in a construct (Sekaran, 2006)

3.8 Method of Data Analysis

This is the process and statistical tools by which researchers analyse data, test research hypotheses and afterward refine theories (Sekaran & Bougie, 2013). In this study Statistical Package for Social Science (SPSS) Version 24 would be use for analysis. SPSS is chosen for its simplicity and completeness (Sekaran, 2003) to attain internal consistent reliability in data analysis and hypotheses testing. Others benefits of SPSS is the factor and reliability analysis to accesses the goodness of model, validity and reliability of measures, and descriptive statistics to support the features of the respondents, and relationship analysis to help in explaining the association that exist between Project Management Factors and other constructs and lastly, to test the theorized effects of competency of project manager; competency of project team members' on Building performance, as well as the intervening influence of Ethical Practices.

4. CONCLUSION

Presented in this paper is an introduction of new concepts regarding various reasons why ethical practices should be considered as important mediating variable to strengthen the relationship between independent variable of project management processes of competency of project manager and team members' and factors related to project and the building performance as dependent variable. However, work is still ongoing to further this research.

5. CORRESPONDENT AUTHOR'S PROFILE

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