

Realities of Construction Health and Safety Regulation in Nigeria

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the requirements of the University of
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Philosophy

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DECLARATION

“I certify that the work contained in this thesis, or any part of it, has not been accepted in substance for any previous degree awarded to me, and is not concurrently being submitted for any degree other than that of (Doctor of Philosophy) being studied at the University of Greenwich. I also declare that this work is the result of my own investigations, except where otherwise identified by references and that the contents are not the outcome of any form of research misconduct”

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ABSTRACT

Health and safety (H&S) has long been at the forefront of policymaking resulting in various regulatory approaches, making it a priority on the corporate strategy agenda. Thus, some companies have progressed to self-regulation, which although being effective in some cases does have some potentially serious limitations. Self-regulation in relation to H&S and the links with the environments that companies operate in remain under-researched. This research advances the understanding of the current realities of construction H&S regulation in Nigeria (an industry reported as unregulated, self-regulation overlooked), and develops a framework of recommendations based on empirical data and analysis.

Construction contractors and key informants were interviewed. The thematic analysis procedure shows that the current realities of regulating construction H&S in Nigeria can be understood and explained as follows. There are secondary factors in the social, political, cultural, economic and institutional contexts, which influence the primary factors, approaches, and attitudes of the contractors towards H&S self-regulation. However, the regulatory system is multiplex and counterproductive on the regulation of H&S; this, in turn primarily determines H&S self-regulation. The primary factors, in turn, influence the attitudes of the contractors, which in turn, influence the approaches to H&S self-regulation.

The findings show that religion, cultural institution and money culture are among the social and cultural context factors. Political context factors include the political influence and lack of governmental action while institutional context factors include inadequate H&S policies and multiple actors in H&S regulation. The self-regulatory approaches can be explained as voluntary, industry-led, community-led, H&S crusader-led, and enforced/mandatory. The understandings of the contractors of viewing H&S as a 'primary responsibility', and 'caring for others' enhance H&S self-regulation while 'bias in H&S responsibility', 'the understanding that H&S self-regulation is about window dressing' all constrain H&S self-regulation. While contextualised construction H&S laws and a consolidated H&S regulatory system to be overseen by a central regulatory agency are recommended for policymakers, two antigraft institutions should monitor the activities of the H&S regulatory agency.

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GLOSSARY OF TERMS

The confines of this study present it with terminologies that can be interchanged; thus, it is a heuristic device where concepts are clarified. For the purpose of this study:

Regulation: this is used here as a verb: the act of systematically developing, administering and controlling activities to maintain a desired established system.

Standards: this is used here as requirements for organisations except where specified. This includes regulatory standards, quasi-regulatory standards.

Enforcement of laws can be defined as the act of ensuring that people or organisations comply or adhere to laws.

Legislation: covers Acts of parliament and **secondary legislation**, which are products of Acts of parliament, for example, statutory regulations like the Construction Design and Management Regulations 2015. However, where inevitable but in a few places, secondary legislation is distinguished from the primary legislation.

Persuasion ‘is the process that regulatory agencies use to provide information and advice to employers, and others that have legal obligations, of their rights and responsibilities’ (Seljak et al. 2000: 43).

Punishments are ‘actions by regulatory agencies to coerce employers and others to comply with the law’ for example, fines, closure of premises (Seljak et al. 2000: 44).

SELECTED PUBLICATIONS RESULTING FROM THE STUDY

- Umeokafor, N. I., Umeadi, B. and Jones, K. G. (2014) Compliance with occupational health and safety regulations: A review of Nigeria's construction industry. In Ejohwomu, O. & Oshodi, O. (eds), *3rd International Conference on Infrastructure Development in Africa (ICIDA)*, 17–19 March 2014, Abeokuta, Nigeria, 70–84.
- Umeokafor, N., Umeadi, B., and Isaac, D., (2014) Determinants of compliance with health and safety regulations in Nigeria's construction industry. *Journal of Construction Project Management and Innovation*, 4, (S1) 882–890. This is an extended version of the conference paper above. Of the 48 peer-reviewed papers presented at the 3rd International Conference on Infrastructure Development in Africa, ICIDA 2014, this was among the five papers selected and published in the above Journal.
- Umeokafor, N. (2015) A discussion of observation as a method of generating data in the construction industry. *Civil Engineering Dimension*, (Dimensi Teknik Sipil) 17, (1) 54–58.
- Umeokafor, N. I (2015) An assessment of the influence of contextual environment on health and safety practices in the Nigerian construction industry. *Proc.: CIB W099 International Health and safety Conference*, 10–11 Sept. Northern Ireland, UK, 397–406.
- Umeokafor, N. (2015) The influence of contextual factors on health and safety performance of construction contractors in Nigeria: A comparative assessment. In Carter D., Onjewu A., Kitsos A., Dexter G., Haddoud M., El Hakimi I., Dhakal M., Kong S. (Ed) *Proc.: Plymouth University's Faculty of Business 10th Annual Ph.D conference*, 4–5th June 2015, Plymouth, UK, 43–47.
- Umeokafor, N. I. and Isaac, D. (2015) A framework for analysing the determinants of health and safety self-regulation in the construction industry. In Behm, M and McAleenan (Ed.), *Proc.: CIB W099 International Health and safety Conference*, 10– 11 Sept. 2015, Northern Ireland, UK, 478–487.
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- Umeokafor, N. I. and Isaac D. (2016) Construction health and safety self-regulation in developing countries: A Nigeria case study, *Journal for the Advancement of Performance Information and Value*, 8(1), 26–41
- Umeokafor, N. I. (2016) Approaches, drivers and motivators to health and safety self-regulation in the Nigerian construction industry: A scoping study, *Architectural Engineering and Design*, 12(6), 460–475.

- Umeokafor, N. I. (2017) Barriers to construction health and safety self-Regulation: A scoping case of Nigeria. The *Civil Engineering Dimension* (Dimensi Teknik Sipil), 19(1), 44–53.
- Umeokafor, N. I. (2017) An appraisal of the barriers to client involvement in health and safety in Nigeria’s construction industry. *Journal of Engineering, Design and Technology*, 15(4), 471–487.
- Umeokafor, N. I. (2017) An investigation into public and private client attitudes, commitment and impact on construction health and safety in Nigeria. *Engineering, Construction and Architectural Management*, in press, doi: 10.1108/ECAM-06-2016-0152.
- Umeokafor, N. I. and Windapo, A. O. (2017) Understanding the underrepresentation of qualitative research approaches to built environment research in Nigeria. *International Journal of Construction Education and Research*, doi.org/10.1080/15578771.2017.1316799.

NOTE: In the thesis, there are efforts to show how each of the publications above emerged, relate or was inspired by the study. However, the readers would have to refer to the reference list for appropriate differentiation of the papers with the same year of publication.

LIST OF ABBREVIATIONS AND ACRONYMS

ATT	Average Treatment Effects on the Treated
CASHES	Community Affairs, Safety, Health, Environment and Security
CDM	Construction Design and Management Regulations
CHASE	Construction Health and Safety Excellence
CLO	Community Liaison Officer
COREN	Council for Regulation of Engineering in Nigeria
CSER	Corporate social and environmental responsibility
CSRC	Constant Self-regulating Contractors
DCSL	Deloitte Corporate Services Limited
DFID	Department for International Development
DPR	Department of Petroleum Resources
ECA	Employee's Compensation Act
EFCC	Economic and Financial Crimes Commission
FCT	Federal Capital Territory
FERMA	Federal Road Maintenance Agency
FOCI	Federation of Construction Industry
FSC	Forest Stewardship Council
GDP	Gross Domestic Product
GNP	Gross Net Product
H&S	Health and Safety
HSE	Health and Safety Executive
ICPC	Independent Corrupt Practices and Other Related Offences Commission
ILO	International Labour Organisation
ISPON	Institute of Safety Professionals of Nigeria
LPID	Federal Ministry of Labour and Employment Inspectorate Division
LSSC	Lagos State Safety Commission
NCSRC	Non-Constant Self-regulating Contractors
NESREA	National Environmental Standards and Regulations Enforcement Agency
NGOs	Non-Governmental Organisations
NHDR	National Human Development Report

NHP	Natural and Health Products
NICE	Nigerian Institute of Civil Engineers
NIOB	Nigerian Institute of Building
NIStructE	Nigerian Institution Of Structural Engineers
NLC	Nigerian Labour Congress
NNBS	Nigerian National Bureau of Statistics
Non-SRC	Non-Self-regulating Contractors
NSE	Nigerian Society of Engineers
NSITFMB	National Social Insurance Trust Fund Management Board
OECD	Organisation for Economic Co-operation and Development
OSH	Occupational Safety and Health
OSHA	Occupational Safety and Health Administration
OSHBLD	Occupational Safety and Health Branch, Labour Department
PIG	Public Interest Groups
PPE	Personal Protective Equipment
PS	Process Safety
RC	Responsible Care
SI	Severity Index
SMEs	Small and Medium-sized Enterprises
SURCON	Surveyors Council of Nigeria
TRI	Toxics Release Inventory
VCoP	Voluntary Code of Practice

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DEDICATION

This PhD thesis is dedicated to God Almighty and to my father Uchenna Michael Umeokafor, Akaonyewetalu.

CHAPTER 1: INTRODUCTION TO THE STUDY

1.1 BACKGROUND OF RESEARCH

The construction industry presents accident-prone activities, posing a serious threat to ‘all and sundry’ (Dodo 2014; Otham 2012). The accident rate is disproportionate to the number of workers when compared to other industries (Geminiani et al. 2013; Tanko & Anigbogu 2012). Just like many countries, the fatality record of the Great Britain's construction industry is among the highest compared to other industries with the provisional statistics by HSE (2016) reporting up to 45 fatal injuries in 2015/2016, second to services industry but ahead of the agriculture and the manufacturing industries. According to Eurostat data in HSE (2016), countries not limited to Denmark, Poland, Italy, Switzerland have recorded above 1.0 incidence rate (per 100,000 employees) while Romania, France, Portugal have recorded above 2.0 incidence rate (per 100,000 employees).

Evidence in studies shows that developing countries tend to have worse H&S records (see Diugwu et al. 2012; Idoro 2011a; Kheni 2008; Nzuve & Lawrence 2012; Windapo & Oladapo 2012). Indeed, a study of construction contractors in Nigeria by Idoro (2011a) shows that in 2006, the best safety record was two accidents per 100 workers and five injuries per 100 workers. Of the 150 respondents in a study, Famuyiwa et al. (2011), 51.3% claim that accidents occasionally occur on sites in Lagos state Nigeria. Similarly, Kheni et al. (2006) report an accident rate of 14% for Ghana’s construction businesses even though the workforce contribution is 1.4%.

While regulatory inadequacies are not the stand-alone explanations for the poor state of H&S in Nigeria, they are exemplified in studies as among the key explanations (Diugwu et al. 2012; Dodo 2014; Idoro 2008). The Factories Act of 2004 is the main local H&S legislation in Nigeria. The aforesaid Act is criticised as inadequate and requires updating; Article 87 of the Act excludes construction sites and activities in the definition of its premises; hence, the industry is viewed as unregulated (Diugwu et al. 2012; Famuyiwa 2011; Idoro 2011a; Umeokafor et al. 2014a).

However, there is evidence in literature challenging the position of the above authors, but demonstrating that the Nigerian construction industry is self-regulated in various

forms. Self-regulation is the practice where an industry or organisation designs or adopts standards and administers them with little or no external involvement (Castro 2011; Gunningham 1995, 2011; Havinga 2006; Hutter 2006; King & Lenox 2000; Organisation for Economic Co-operation and Development (OECD) 2015). In Nigeria, while some construction contractors adopt and administer legislation from developed countries or international standards (Famuyiwa 2011; Idoro 2004, 2008, 2011a), some adopt and administer the local National Building Code of 2006 which is yet to receive legislative backing (Omeife & Windapo 2013). The National Building Code of 2006 sets minimum standards including safety in the building industry. Similarly, industries, such as oil and gas, set standards that contractors who work for them adhere to, while the Lagos State Safety Commission (LSSC) oversees H&S in the state including the construction industry (Umeokafor & Isaac 2016).

The premise in the above paragraph is consistent with the literature, industry, pure and enforced self-regulation as all occurring in Nigeria. Self-regulation can be voluntary, where the organisation formulates internal policies and enforces them without any external involvement — pure self-regulation (Graham & Woods 2006; Gunningham 2011; Levinson 1987). A slightly alternative approach is enforced self-regulation where the organisation or industry is required by law to formulate internal policies to achieve the set standards of the regulator (Fairman & Yapp 2005a; Gracia Martinez et al. 2007; Havinga 2006; Hutter 2001; Hutter & Amodu 2008). Industry regulation involves a group of firms in an industry or the industry or professional bodies voluntarily developing standards, enforcing, monitoring them (Castro 2011; Finger & Gamper-Rabindran 2013; Gunningham 1995; Havinga 2006; Hutter 2006; King & Lenox 2000), but if the government or third party becomes involved, it is co-regulation (OECD 2015). If this is the case, the approaches to H&S regulation in the Nigerian construction industry are multiplex, hence a unique regulatory environment. Scholars note that self-regulation differs from country to country and industry to industry (Castro 2011; Gunningham 2011; Hutter 2006).

The above regulatory approaches present different methodologies, challenges and opportunities, suggesting that the H&S regulatory environment of Nigeria's construction industry may be complex. Typically, there is over-representation of interest; debate on the form that industry regulation should take, and the level of

governmental involvement (Gunningham 2011; Havinga 2006). There is also the false intention of joining the self-regulatory programme (Lennox & Nash 2003) and huge regulatory burden on the regulated (Aalders & Wilthagen 1997; Hutter 2001). Similarly, Walls and Dryson (2002) show that H&S self-regulation failed in relation to small enterprises in the manufacturing industry in New Zealand. The statistical evidence in the Walls and Dryson (2002) study indicate that there is a lower likelihood of small firms, unlike large firms, to provide H&S information in terms of hazards relating to confined spaces in addition to providing material safety data sheets. The foregoing findings evidence that it has failed to deliver most of the promises it presents in realising compliance.

On the other hand, self-regulation has recorded success in many countries and industries. For example, the H&S record of the Great Britain construction industry provides evidence of successful self-regulation where ‘the latest rate of fatal injury is 1.94 per 100 000 workers, compared to a five-year average of 2.04’ (HSE 2016: 4). Also, a self-regulatory programme, Responsible Care (RC), is reported by Finger and Gamper-Rabindran (2013) and King and Lennox (2000) to contribute to improving H&S. Analogously, based on the premise that Nigerian contractors self-regulate, an inference can be made from studies such as Windapo and Jegede (2013) (where better H&S performance is reported in some firms) that self-regulation has been successful. Windapo and Jegede (2013) report that employees in 46 indigenous SMEs they surveyed have witnessed 22 fatalities, while their colleagues in the 15 multinational construction firms have witnessed one fatality.

The success of self-regulation can be explained by the attitudes (opinions, beliefs, feelings) of the regulated (Scharrer 2011). For instance, when some poor performing firms join self-regulatory programmes because of insurance benefits, the motives for self-regulation are questionable (Lennox & Nash 2003). There is evidence of misconduct among the regulated that take part in self-regulatory programmes (King & Lennox 2000). When self-regulation is voluntary, the understanding of the regulated may be that the structure, quality and standards are inconsequential (Gunningham 2011). When the cost of self-regulation is high, the regulated may cut corners so as to save cost (Gunningham 2011). Such poor understanding of self-regulation may mean a poor commitment to its requirements and principles.

Similar negative attitudes, but in terms of H&S, have been reported in the Nigerian construction industry, and the external environment that the contractors operate in fuels this. For instance, Windapo and Jegede (2013) note that contractors (who are SMEs) prioritise saving cost over H&S because of financial constraints. Studies show a poor concern for H&S in the Nigerian construction industry, for example, Aniekwu (2007), Belel and Mahmud (2012). Conversely, the positive understanding of SME contractors, which underpins the adoption of H&S management procedures is that they view their workers as a family because of the collectivist cultural value where they have a responsibility for younger ones (Kheni et al. 2007).

Based on the background established so far, the main research question is posed: **how can the current realities of practices in the regulation of H&S in the Nigerian construction industry be explained?** Understanding the regulation of H&S from the Nigerian perspective is vital as H&S regulation can be complex (Kingston-Howlett, 2001). The sub-research questions of the above main question are:

- Research question 1: How can the current realities in approaches to construction H&S regulation be explained?
- Research question 2: How can the attitudes of construction contractors towards construction H&S self-regulation be explained?
- Research question 3: How can the determinants of construction H&S self-regulation in Nigeria be explained?

Examining the attitudes of contractors and not the other stakeholders is underpinned by points such as: that H&S responsibilities is normally left to the contractors (cf. Windapo & Jegede 2013); improving the credibility of the study; contractors being at the forefront of the hazardous construction activities.

1.2 RESEARCH AIMS AND OBJECTIVES

The aims of the study are to advance the understanding and critically explain the current realities of the regulation of construction H&S in Nigeria and to develop a framework of recommendations for improving the regulation of H&S based on empirical data and analysis. To achieve the aims, the following objectives are set:

- Objective 1: Review literature on regulation, including self-regulation, highlighting the process, approaches, opportunities and challenges.

- Objective 2: Critically review literature on the H&S regulatory framework of Nigeria and its construction industry including its legislative context, indicating the approaches to H&S regulation and the attitudes of contractors towards it.
- Objective 3: Analyse the political, social, institutional, economic and cultural contexts of Nigeria, highlighting the contextual influences on the regulation of construction H&S in Nigeria.
- Objective 4: Critically review literature on the determinants of self-regulation and compliance and develop a framework for analysing the determinants of construction H&S self-regulation based on theories and evidence, considering the social, institutional, economic, political, and cultural influences in Nigeria.
- Objective 5: Empirically verify or refute the literature indicative approaches to construction H&S regulation, investigate other approaches (if any) and the attitudes of contractors towards H&S regulation.
- Objective 6: To establish and explain the factors influencing the self-regulation of construction H&S in Nigeria.
- Objective 7: Produce a framework to advance the understanding and critically explain the current realities of construction H&S regulation in Nigeria based on empirical data and analysis.
- Objective 8: Develop a framework of recommendations for improving construction H&S regulation in Nigeria based on empirical data and analysis.

1.3 SIGNIFICANCE OF THE STUDY

Determinants of self-regulation are extensively covered in literature, but regarding the construction industry, especially in developing countries, they remain underexamined if not unexamined. Most studies on self-regulatory determinants are from environmental management/sciences, and industrialised nations. For example, From a US perspective, Giuliano and Linder (2013) demonstrate a framework to understanding decision-making for self-regulation in environmental management, covering areas such as business case, social legitimacy. While Levinson (1987) examines the subject from a public sector and non-manufacturing perspective in the UK, King and Lenox (2000) examine industry self-regulation from a US manufacturing sector perspective.

Examining the subject from a construction perspective provides construction context understanding to the subject factoring in the fragmentation of the industry in terms of workforce and supply chain. Fragmentation of the workforce and supply chain and differentiations in organisational, technological and cultural issues pose challenges to the construction industry (Diugwu et al. 2014; Lingard 2013; Manu 2012), making the construction industry unique when compared to other industries (Alhajeri 2011).

Additionally, the demonstrated uniqueness of the H&S regulatory environment of the Nigerian construction industry, which may be viewed as complex, and the misconception that the industry is unregulated, makes a case for the study. The findings of the study on the current realities of construction H&S self-regulation in Nigeria present Nigeria with features and opportunities that will contribute to not only improving H&S in Nigeria but also in other developing countries with a distributed or fragmented regulatory regimes. Also, the study contributes to socio-legal literature.

Furthermore, in addressing H&S challenges in developing countries, the contextual environments of these countries need to be understood (Kheni et al. 2010; Umeokafor & Windapo 2016). Regulatory strategies should be designed or developed based on the contexts of countries (Ayres and Braithwaite 1992; Danso et al. 2015; DiMento 1999). Danso et al. (2015), while making a case for a contextualised research project for Ghana, strongly argue against directly copying or transposing tools, measures inter alia, from developed countries for use in developing countries. Danso et al. (2015) go on to demonstrate the downsides of doing so. This is logical, as construction contractors operate in the cultural, social, political and economic environments of the country (Kheni 2008; Kheni et al. 2007). This explains the impractical policies and standards in Nigeria, which are adopted from developed countries (Aniekwu 2007). Despite this, the literature review demonstrates that contextual influence on regulation and its determinants remains underexamined if not unexamined in broader terms.

Lastly, the study contributes to qualitative strategies and methods, which are underadopted (even where most appropriate) in some academic disciplines (e.g. construction management) when compared to other research methodologies (Carter & Fortune 2004; Dainty 2007; Ejohwomu & Oshodi 2014; Laryea and Leiringer 2012).

This has inspired two studies on the underrepresentation of qualitative strategies and methods in the built environment, one of which is Umeokafor and Windapo (2017).

1.4 RESEARCH STRATEGY AND METHODS

The research questions and objectives show that a qualitative strategy is appropriate for the study. Qualitative strategies are efficient in answering ‘what’, ‘why’, and ‘how’ research questions (Eriksson & Kovalainen 2008; Zanjani 2015). They are of interpretivist/constructivist paradigm, and mainly assume the ontological position that reality is multiple and socially constructed (Creswell 2007; Kipo 2013; Lietz, et al. 2006; Umeokafor 2015a). Its epistemological position is that the object of study and the investigator are not independent entities (Creswell 2007; Kipo 2013,) hence the close involvement of the investigator is pertinent (Bryman 1984; Creswell 2007).

In the current study, purposefully combined sampling methods (Patton 1990), stratified and snowball techniques, were adopted and construction contractors and key informants interviewed. Critically reviewing literature, a framework for analysing the factors of H&S self-regulation was developed, validated by academics and practitioners and partly used for analysing the data (Umeokafor & Isaac 2015a). Using four analytical groups, thematic analysis of six phases reported in Braun and Clarke (2006) was conducted through inductive and deductive approaches. Using the saturation grid, the saturation of the data was established and data analysis discontinued (Brod et al. 2009). In ensuring trustworthiness in the research, the interview guides were checked for their usability (Castillo-Montayo 2016); multiple triangulation (Adami 2005) and peer debriefing (Creswell & Miller 2000) have also been adopted. Finally, a framework that explains the current realities of the regulation of construction H&S and the framework of recommendations for improving it has been developed; academics and industry practitioners pretested the latter.

1.5 ORGANISATION OF THESIS

Chapter 1: Introduction: In presenting the background of the study, this chapter also presents the study aims, objectives and an outline of the research methodology.

Chapter 2: Literature review: The chapter reviews the germane literature on regulation, including self-regulation, covering its process, challenges and

opportunities creating a platform for understanding Chapter 3. The relationship between compliance with the law and regulation is also demonstrated.

Chapter 3, literature review, critically reviews literature on construction H&S in Nigeria, indicating the approaches to H&S regulation and the attitudes of contractors towards it. Also, it demonstrates the H&S institutional influence on H&S regulation.

Chapter 4: Literature review: The chapter analyses the social, political, cultural, economic contexts and demographics of Nigeria, and its construction industry and provides a platform for in-depth understanding of their influences on H&S regulation.

Chapter 5: This chapter critically reviews the literature on the determinants of self-regulation and compliance with laws showing a gap in knowledge in terms of self-regulation. It then factors in the literature discussions in Chapters 2–4 to develop a framework for analysing the determinants of construction H&S self-regulation.

Chapter 6 focuses on the research strategy, the epistemological and ontological positions that underpin the study, and the data collection and analysis processes.

Chapter 7 presents the first facet of the result — the views of the respondents on the current realities of the approaches and attitudes of contractors towards construction H&S self-regulation.

Chapter 8 provides insight into the second facet of the results — the views of the respondents on the current realities of the factors of construction H&S self-regulation.

Chapter 9 is a presentation of the third facet of the results — the recommendations of the respondents on improving the regulation of construction H&S.

Chapter 10 consolidates Chapters 7, 8 and 9 and discusses the emerging themes, relating them to the literature to produce a framework that advances the understanding and critically explains the current realities of construction H&S regulation in Nigeria, and produces the framework of recommendations for improving it.

Chapter 11 comprises the conclusions and recommendations of the study. The contributions to knowledge, the limitations of the study, and areas of further studies are also included.

CHAPTER 2: REVIEW OF FIXED AND FLEXIBLE REGULATION

2.1 INTRODUCTION

This chapter, which is aimed at highlighting the process, challenges and opportunities and approaches to regulation, addresses objective 1 and provides a platform for addressing objectives 2 and 3 and a better understanding of the phenomenon in study. As a result, the chapter reviews germane literature on regulation including self-regulation by implication approaches and process; it discusses compliance theories, demonstrating a relationship between regulation and compliance with laws.

2.2 FORMS OF LEGISLATION

- *Action/state rules (Hale et al. 2013) or prescriptive legislation (Hoppe n.d.)* — specifying exactly what should be done, providing standards of behaviour or what to avoid (see specification standards in Henson & Caswell 1999). Hale et al. (2013) assert that this can easily be measured to show the level of compliance, but contend that some aspects may be subject to translation. Hoppe (n.d.) then contests that they are incapable of tackling diversity in designs perhaps hindering innovation. Further, Bishop et al. (2001) assert that safety in this form of legislation is perceived as the regulator's responsibility.

The regulatory model of many industries in the USA is not goal-based; its H&S performance is not as good as that of the UK, which adopts a goal-based regulatory model, suggesting that the latter may be more efficient. However, it can be argued that the form of legislation is not the stand-alone factor for improving H&S performance. Nonetheless, while the prescriptive laws have limitations, they appear to be more effective for SMEs. Indeed, as a result of findings in Fairman and Yapp (2005b), they recommend prescriptive requirements for SMEs, as this improves their understanding of compliance and is perceived to be easier to implement by SMEs. This is in accord with Loosemore and Andonakis (2007) who found that small contractors prefer prescriptive requirements. The complexity and legalistic phrasing of laws determine their comprehension (Loosemore & Andonakis 2007). It can be concluded that small contractors prefer more prescriptive legislation because it is easier to follow. It does not require so much risk-based decision-making and

avoids the need for expensive consultants to assist SMEs in interpreting complex legislation.

- In contrast to action/state rules, legislation can be principle-based — imposing statutory responsibilities on all parties, enabling them to proactively manage risks, but leaving them to do so mostly at their discretion (see Loosemore & Andonakis 2007). It is otherwise referred to as performance standards in Henson and Caswell (1999). Hale et al. (2013) and Hoppe (n.d.) describe principle-based regulations as: goal-setting legislation — specifying outcomes but not how to achieve them. In this form of legislation, understanding and translating the legislation is subject to the discretion and knowledge of the regulated (Hale et al. 2013). It enables the regulated to invent or adopt different standards to achieving compliance. As Bishop et al (2001) argue, it promotes a free market. This form of legislation is prominent in a few countries especially the UK and in Australia, for example, the Construction Design and Management (CDM) Regulations 2015.
- Mixed legislation: prescriptive and goal-based — Loosemore and Andonakis (2007) report a mixture of two forms of legislation in Australia — principle-based legislation but still with prescriptive control in hazardous industries. Principle-based legislation combined with prescriptive control is acknowledged or recognised in studies (Aalders & Wilthagen 1997; Fairman & Yapp 2005a; Havinga 2006) to be more effective than simply prescriptive approach. The three forms of legislation above determine the regulatory approach to be adopted.

2.3 THEORETICAL FOUNDATION

Motivational complexity exists in relation to enforcement and compliance (Ayres & Braithwaite 1992); despite regulatory efforts or systems and laws, compliance is not guaranteed (Amodu 2008). Enforcement of laws or compliance theories are underpinned by mainly deterrence-based and compliance-based theories (Fairman & Yapp, 2005a; Oded 2010). A stark separation between the two is simplistic (Ayres & Braithwaite 1992; Rorie 2015). This is because the regulated is heterogeneous, made up of both law-abiding players (the assumption of compliance theory) and amoral calculators (the assumption of deterrence theories), according to Ayres and

Braithwaite (1992). Consequently, the foregoing theories are combined to form the mixed regulatory strategies, for example, responsive regulation (Ayres & Braithwaite 1992), corporate compound liability and gatekeeper-based targeted enforcement strategy (Oded 2010).

2.3.1 Rationalist theory: Amoral calculators

Deterrence theory: Macrory (2010) and Sutnien and Kuperan (1999) trace this back to legal economists dating to the 1960s. Traditionally, deterrence theory is aimed at deterring people from breaching the laws. It upholds that punitive measures make entities comply with laws (Aalders 1999; Ayres & Braithwaite 1992; Fairman & Yapp 2005b; Sutnien & Kuperan 1999; Tombs & Whyte 2013) and reoffending is avoided. The fines, prosecution, and/or other sanctions are used here. In the concept of the current study, the theory is underpinned by the economic philosophy (Ogus & Abbot 2002) in that financial or legal implications of non-compliance will deter organisations or people from breaching the law (also see Ayres & Braithwaite, 1992). Becker (1968 in Fairman and Yapp 2005a) echoes from an economics perspective using the equation, $U < PD$, where:

U is the benefit of non-compliance

P is the likelihood of being apprehended

D is the cost of being apprehended.

The equation means that to secure compliance, the direct and indirect costs (such as reputation of firms, fines, loss of production, time, legal expenses *inter alia*) and the possibility that offenders will be apprehended will be more than the perceived benefits of non-compliance to make them comply with the laws (Ogus & Abbot 2002; Sutnien & Kuperan 1999; Tombs & Whyte 2013; Winter & May 2001). This suggests that compliance is viewed as a rational behaviour (Fairman & Yapp, 2005a,b; Tombs & Whyte, 2013) and calculated (Winter & May 2001).

Arguments against this theory remain significant. Firstly, Fairman and Yapp (2005a) argue that the cost of being apprehended is difficult to calculate. This is because there are direct and indirect costs and as Manu (2012) posits, measuring the direct and indirect cost in relation to H&S is difficult. Secondly, organisations may have a perfect knowledge of being caught (Fairman & Yapp 2005b; Tombs & Whyte 2013),

so if the likelihood is low or even zero, the theory does not hold. Thirdly, another count against this theory in Tombs and Whyte (2013) is that the theory is based on rationality and this is dependent on the ability of the regulated to make rational judgements. They argue that for deterrence to work, the regulated must understand the future consequences of a decision not to comply (Tombs & Whyte 2013). Deplorably, this is not usually the case, as people are unable to control social conditions around them, which comprise their rationality (Tombs & Whyte 2013). Sutnien and Kuperan (1999) also note the shortcomings of the theory.

Tombs and Whyte (2013) treat the many points against deterrence theory in detail. They argue that the deviation from deterrence theory is ostensibly in the mind of regulatory scholars; despite that they may dismiss the concept as being irrelevant. This results in the misrepresentation of the significance of deterrence in academic papers (Tombs & Whyte 2013). Tombs and Whyte (2013) argue that the deviation from adopting deterrence oriented regulatory approaches is politically motivated, and most points are myths, which help politicians propel the idea of compliance-oriented approaches to impress businesses.

2.3.2 Compliance-based or cooperative theories

These theories are of the philosophical position that compliance is best achieved through the conciliatory style of enforcement (Fairman & Yapp 2005a; Oded 2010), persuasion, and the cooperation of the regulated but not through threat of sanctions (Oded 2010). Compliance strategies can encourage a better relationship between the regulator and the regulated (Aalders & Wilthagen, 1997; Fairman & Yapp 2005b); they foster a flexible approach in regulation (Fairman & Yapp 2005a).

2.3.2.1 Normative decision-making: Mitchell (2007) presents this theory while writing about International Environmental Agreements. Mitchell relates this to understanding ‘...behaviour as a response to an interplay of norms and identity (involving elements of both socialisation and internalisation) in a process characterised by the ‘logic of appropriateness’’ (p 902). To illustrate, the decision to comply is made based on what is the most practical usefulness of something to an individual after considering the available information.

Mitchell (2007) contends that in this theory, actors do not consider the benefits or implications of compliance as the choices are not based on the logic of consequence-underpinned theories; rather they decide their action on the basis of the logic of appropriateness — what is right for the actors at that given time. This is subject to the information available and/or choice and the practicality of this. Nonetheless, studies adopt this model for understanding compliance (Fairman & Yapp 2004, 2005a). In particular, Fairman and Yapp (2005a) has adopted this model in a study of food SMEs and enforcement bodies in the UK in understanding the impact of enforcement interventions in the decision-making process of the SMEs. This suggests the steps that business may take in theory in the implementation of risk regulation (Fairman & Yapp 2005b). Yapp and Fairman (2004a) report that while applying this model in their study, there has been a reliance on external agents because of lack of management structures for SMEs.

Critics contest the practicality of this model in that decisions in organisations are mostly based on what makes sense to the individual or organisation (Weick 2001). Weick (1995, 2001) goes further to propose a theory: sense-making, which is discussed below. In affirmation, Fairman and Yapp (2005b) sought to understand the response of SMEs in England to risk regulation and conclude that sense-making theory is a better framework for explaining compliance processes of the SMEs than the decision-making theory.

2.3.2.2 Sense-making: This theory remains considerably documented in-depth in various studies (Ancona 2012; Lyhne 2010; O'Leary & Chia 2007; Weick 1995, 2001; Weick et al. 2005), but remains extensively researched by Karl Weick. It relates to the process of making sense (Weick 1995) where there is ambiguity and complexity, which by implication according to Fairman & Yapp 2005b, determines if people ignore or comply with laws. Therefore, understanding the unknown is needed (Ancona 2012) for informed decision-making. As a result, finding a balance between the level of the flexibility or rigidity of man's mental structures which allows action and, on the other hand, concurrently challenging understanding is vital (Lyhne 2010).

Lyhne (2010) goes further to elaborate on the make-up of Weick's organisational version thus: enactment, selection and retention, noting that it is about searching for

the meaning of experience, and situations; a decision is then made based on the level of reasonability of the outcome which is then incorporated in subsequent actions. Hence, the role of gathering information in this theory is emphasised in Ancona (2012) and Fairman and Yapp (2005b). This is consistent with Fairman and Yapp's findings where the SMEs exhibit the following in terms of compliance decision making: they recognise the gap between the supposed procedures and the current operational procedures; interpret the findings (i.e. gap) and decide on adequate actions; implement the decisions (Fairman & Yapp 2005b).

Critically, the theory is based on the false assumptions that: compliance decision-making is based on reasonability; the information needed is readily or easily available for organisations and effective in decision-making; the cognitive abilities of the personnel in organisations are always high and focussed toward compliance decision-making; only one theory can explain the compliance behaviours of organisations.

2.3.3 Mixed regulatory strategies

In addition to the premise established earlier for combining the fixed and flexible regulations, the ability of one to complement the weakness of other (Oded 2015; Rorie 2015) and the literature discussion so far further underpin the combination.

2.3.3.1 Responsive regulation: Coined by Ayers and Braithwaite (1992) in an attempt to find a balance between the compliance-based and deterrence-based regulatory strategies, command and control and flexible regulations. According to Rorie (2015), this regulatory strategy has stirred a debate between strong state intervention and free market ideas of regulation. This approach seeks to understand when to punish or when to persuade (Baldwin & Black 2007). The state should know when to step in with more or less punitive actions based on the conducts of the regulated, for example, persuasion in Figure 2.1 (Ayers & Braithwaite 1992; Braithwaite 2006; Oded 2015). The responsive measures can be advice and guidance, negotiation, enhanced surveillance, coercive measures (Amodu 2008), but 'promotes soft regulatory measures such as persuasion and guidance, as the first enforcement measures to be used' (Oded 2015:10). The higher the regulator's level of punitiveness the more they can get organisations to comply at the persuasion level, suggesting cooperative regulation (Ayres & Braithwaite 1992).

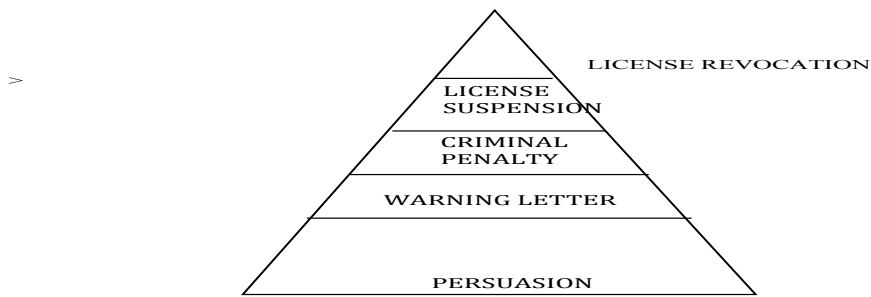


Figure 2.1 Enforcement Pyramid; Source: Ayres and Braithwaite (1992)

From an industry perspective, responsive regulation presents a broader concept; firstly engaging in flexible and broad-based strategies — self-regulation then escalating the pyramid (Figure 2.2) where command regulation with non-discretionary punishment is the peak (Ayres & Braithwaite 1992; Baldwin & Black 2007; Braithwaite 2006). If intelligently used, responsive regulation can enhance compliance (Amodu 2008).

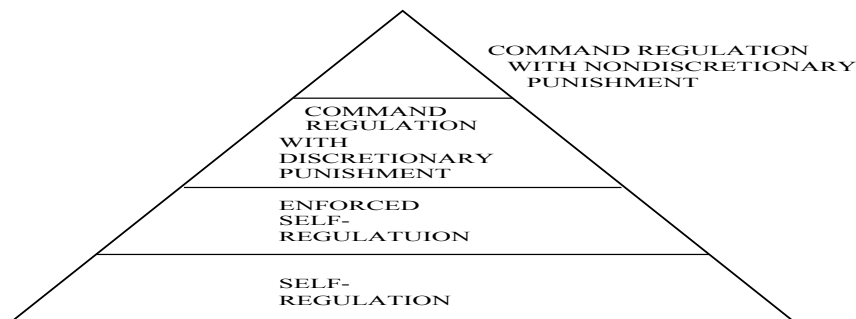


Fig 2.2 Enforcement Strategies Pyramid; Source: Ayres and Braithwaite (1992).

Baldwin and Black (2007) note that the main criticism of this approach are not limited to: the fact that escalating the pyramid may not be possible or suitable due to severity of risks or violation of laws; escalation or de-escalation on the pyramid is subject to the cooperation of the regulated; voluntary compliance may be jeopardised due to the punitive action at the peak of the pyramid. Furthermore, views hold that corporate behaviour is determined by industrial culture and or competitiveness in the industry and not by regulatory pressures (Baldwin & Black 2007). Critics view responsive regulation as apparently a political nuance, presenting risk-based targeting and

encouraging a deregulatory effect and not a transcending effect (Tombs & Whyte 2012) as it claims to do. Knowing when to step in may be subject to bias, mistakes, identifying only obvious cases of non-compliance and will be reactive.

Furthermore, responsive regulation may not be an effective regulatory option in some cases. For example, the findings of May and Wood (2003) demonstrate the inconsistencies in inspection (or regulation) that responsive regulation may present thus weakening the ability of the regulated to understand legislation and compliance.

Really responsive regulation: Baldwin and Black (2007) address some of the challenges that enforcers face based on existing compliance theories such as responsive regulation. They propose a more responsive regulatory policy — really responsive regulation. They argue for regulators to really be responsive to the following: strengths and constraints of the institutional setting of the regulator; cognitive and operational setting of each individual organisation; philosophy of regulatory tools and strategies; evaluation and modification of performance of enforcement activities.

2.3.3.2 Tripartism: This concept is inspired by responsive regulation (Aalder 1999). According to Ayres and Braithwaite (1992) it is a policy that fosters the involvement of Public Interest Groups (PIGs), the regulated, and the state in regulation (Also see Aalders 1999). The PIG becomes a significant party in the regulatory process (Ayres & Braithwaite 1992; Gunningham 2011), hence recognising the influence of support groups and public interest groups in achieving compliance (DiMento 1999). This policy ensures that the PIGs get all the information available to the regulator, become part of the negotiations; and can sue or prosecute offenders (Ayres & Braithwaite 1992). In addition to viewing the policy as adequate for H&S, Ayres and Braithwaite (1992) argue the ability of this policy to tackle corruption in regulation.

However, the PIGs may pose problems in achieving this, as they may excessively use the powers and even over-represent the interest of the public to the detriment of the regulated. On the other hand, they can also check excessive influence by the state regulator, fostering the interest of the public. This may, however, put the organisation under regulatory pressure, and it can have economic implications. Additionally, this

policy assumes that there is always an adequate PIG (Ayres & Braithwaite 1992) who will be effective and committed. However, it may not always be that way.

2.3.3.3 Reflectivity

This has been developed by Teubner (1983) based on the reflective law concept, which recognises the imperativeness of indirect systematic support for reflective systems operational in other social subsystems such as legal, economic, political, scientific and religious, as against domineering influence on the subsystems. This suggests a hybrid system with self-regulatory attributes.

Simply put, flexible, linent and cooperative regulatory models (e.g. self-regulation in firms) should itself be regulated (Aalders & Wilthagen 1997). This can be achieved by developing a mixture of public and private strategies, which are legal and non-legal but made up of market-oriented strategies, corporate social responsibility, intermediary structure and networks and systems monitoring. This will provide a negotiated regulatory framework, tackling the regulatory dilemma (*Ibid*).

2.4 REGULATORY MODELS OR APPROACHES

Regulatory models range from no regulation to statutory regulation (Bartle & Vass 2005) or direct command and control intervention (Gracia Martinez et al. 2007). They are underpinned by the forms of legislation and theoretical foundation (in Sections 2.2 & 2.3). Categorising regulatory approaches into a single dimension is challenging; they are complex and multi-dimensional (Bartle & Vass 2005) with a distinct definition of self-regulation impossible because of its varieties (Gunningham 2011).

2.4.1 Command and control regulation

Also known as ‘coercive’ or ‘deterrence-based regulation’ (Rorie 2015), this fixed system of regulation is traditionally based on the regulator solely overseeing the management of risk. The state (mainly through a regulator) sets the standards and the regulator ensures that the standards are met integrally with the help of punitive measures (Havinga 2006; Hutter & Amodu 2008; Tombs & Whytes 2013) (also see Aalders & Wilthagen 1997), hence it is state-centred (Havinga, 2006). The businesses are meant to comply with the set standards, whereas, their responsibilities and abilities in risk management are overlooked (Hutter & Amodu 2008).

The approach is criticised as inadequate, illusory, hindering innovation (Aalders & Wilthagen 1997; Ayres & Braithwaite 1992; Havinga, 2006; Tombs & Whytes 2013); costly (Ayres & Braithwaite, 1992; Pritchard & Walker, 1998; Sutinen & Kuperan, 1999); failing to fully explain compliance behavior (Sutinen & Kuperan 1999). Punitive measures based on criminal laws, which this approach normally relies on need a substantial burden of proof to convict offenders, but offenders resort to hiding or concealing evidence (Mekos 2009).

Command and control is hard to measure, unable to uncover errant activities (Baldwin & Black 2007) and lacks accountability from the offenders. Being sanction-based, inspectors usually execute it, hence more burden on the regulator. Decision-making in inspection is complex (HSE n.d.) and may not observe one-off breaches of the laws.

Consequently, it has recorded limited success, especially with H&S (Aalders & Wilthagen 1997). Thus, there has been a move away from traditional command and control to compliance theories-oriented approaches, a more flexible, open and tolerant regulatory system (Aalders & Wilthagen 1997; Fairman & Yapp 2005a; Graham & Woods 2006; Havinga 2006; Hutter & Amodu 2008; Tombs & Whytes 2013). These approaches include: self-regulation which are responsive regulation (Scharrer 2011)

2.4.2 Self-regulation

2.4.2.1 General background of self-regulation: This section and the following sections support the case for research question 1. Bartle and Vass (2005) and Hutter (2006) record the ‘flotation’ in regulatory trend from inception and acknowledge the prominent role of Britain in self-regulation. It dates back to the 19th century (Bartle & Vass 2005). In relation to H&S and environmental regulation, the efficacy of direct or command and control regulation had become questionable prompting the shift to self-regulation, a flexible, lenient and cooperative regulatory system (Aalders & Wilthagen 1997; also see Hutter & Amodu 2008). In the UK, it has gained ground with the publication of the Robens Committee Report (1972), which prompted the Health and Safety at Work ETC Act 1974. This has ushered in the goal-based approach placing more responsibilities on employers. Correspondingly, countries such as Netherlands are recorded to have gradually developed self-regulatory approaches (Aalders & Wilthagen 1997; Fairman & Yapp 2005b).

2.4.2.2: What is self-regulation? In this thesis, *Self-regulation* is used as a general term to portray any regulatory approach where the regulated has some degree of control (whether full or partial) of ‘...any systematic behaviour of one part (or more) of a system that tends to restrict the fluctuations in behaviour of another part of that system (or the whole system)’ (Kingston-Howlett 2001: 2). This is in line with authors, e.g., Castro (2011) Gunningham (2011), Havinga (2006), and Hutter (2006).

2.4.2.3 General evaluation of self-regulation: Contrary to expectations, self-regulation seems not to have provided a definitive explanation for compliance behaviour. Nonetheless, studies (e.g. Castro 2011; Bartle & Vass 2005; Gunningham 2011) note some benefits of self-regulation over command and control, and these are not limited to: flexibility and adaptability in operation; perceived better operation of the market; innovation in self-regulation. According to Castro (2011), because rules are developed by the organisation and are based on social norm and conducts, the level of acceptance will be higher thus embedding standards and principles. He goes on to argue that self-regulating organisations can be more effective in rulemaking and self-policing (Castro 2011). Self-regulation assumes that risks are better controlled by the creators (Fairman & Yapp 2005a; Levinson 1987). Hence, it is cheaper, involves fewer resources and a less-burdensome approach than the command and control approach (Ayres & Braithwaite 1992; Bartle & Vass 2005). Empirical evidence of successful self-regulatory programmes is covered in Chapter 1 and Section 2.4.2.4.

Conversely, Castro (2011) demonstrates that in self-regulation, legal issues are not incorporated; this does not include enforced self-regulation, a statutory requirement. Studies such as Gunningham (2011) document the inability of self-regulation to fulfill the promises above. In concordance, scepticism exists in relation to this approach in areas such as: accountability and transparency; fostering private interest at the expense of public interest; perhaps not performing as expected (Castro 2011; Bartle & Vass 2005). Empirical evidence of failed self-regulatory programmes is covered in Chapter 1 and Section 2.4.2.4. Despite the points against self-regulation, it remains highly adopted, preferred and a better approach compared to command and control.

2.4.2.4 Categories of self-regulation: Despite the recognition of self-regulation, there is no definitive approach to it. It takes many forms and varies from country to country and industry to industry (Castro 2011; Gunningham 2011; Hutter 2006); the complexity in regulating H&S may further prompt the development of more complex strategies (Kingston-Howlett 2001). Nevertheless, there is a consensus that in self-regulation, private actors such as organisations or industry set standards, administer and enforce them with little or no degree of governmental involvement (Figure 2.3).

- **Bartle and Vass (2005)** conclude by categorising self-regulation into co-operative — the regulated and regulator work together in regard to the statutory regulation; delegated — public authority transfers exercising of statutory duties to self-regulatory bodies; devolved — self-regulatory bodies are empowered by statute; facilitated — the act of self-regulation supported by the state but is not backed up statutorily; and tacit — the entity sets standards, administers and enforces them with little governmental influence.
- **Castro (2011:2):** ‘Co-regulation — the industry and the government jointly administer the regulatory process; No-regulation — ‘involves private, market-based institutions governing their actions through voluntary agreements including industry standards and best practices’.
- **Gracia Martinez et al. (2007)** elaborate the public intervention options as: no intervention — nothing is done in relation to regulation; self-regulation — adoption of a Voluntary Code of Practice (VCoP) or joining VCoP schemes that claim to ensure high safety quality; co-regulation — combination of private and public resources in regulation- or government backed code of practices.
- **Gunningham (2011)** makes a distinction among most forms of self-regulation: individual self-regulation — an individual or organisation regulates itself independent of others; self-regulation by group — a group such as industry sets standards and administers it themselves; economic self-regulation — controlling the market or other spheres of economic life for the protection of people; social self-regulation — to avoid consequence to the workforce, environment and public, firms or their associations adopt proactive measures in their business dealings; (Gunningham 2011). Based on Rees’s concept in 1998, Gunningham goes further to distinguish among three self-regulatory forms based on government involvement. They are: voluntary self-regulation (which is used in this study as pure self-regulation) — the industry or firm sets its rules and standards and enforces them without any degree of government involvement; mandated full self-regulation — rule making and its enforcement is by firm or industry but is a requirement by the government, which also monitors it and can intervene at anytime; mandated partial self-regulation — public set laws and standards are enforced by private firms as a government requirement, or laws and standards set by firms are enforced by a public enforcement body.
- **Levinson (1987)** notes self-regulation arrangements: employees and employer; employees and trade union; management alone.

Figure 2.3: Distinction of the forms of self-regulation: Source: Author’s elaboration

There are plenty of approaches to self-regulation and extensive literature exists in that regard. An attempt is made below to review the vast literature despite its impracticality. Figure 2.3 presents selected studies that distinguish the forms of self-

regulation. However, in practice, this distinction can be blurred. Drawing on the literature review, including Figure 2.3, the various regulatory approaches are categorised under three core approaches and detailed below, further evaluating them.

Industry self-regulation: Industry self-regulation can adopt many forms, but it is based on the concept of industry members or trade associations and/or professional organisations designing standards that will help them regulate their activities (Castro 2011; Finger & Gamper-Rabindran 2013; Gunningham 1995; Havinga 2006; Hutter 2006; King & Lenox 2000) (also see Lenox & Nash 2003). There can also be what can be conceptualised as **delegated industry self-regulation**, where the regulator for the government will delegate some of their power to the industry or industry association, according to Scharrer (2011). On the other hand, this can involve the following: third party regulation — the third party such as non-governmental organisation, require their suppliers to comply with certain safety standards; the third party can, however, concurrently be other parties (Havinga 2006). When it is a requirement by law, it is more of enforced self-regulation. When it is voluntary, which rarely exists (Aalders & Wilthagen 1997; Havinga 2006), its workability is limited to the industry, realising that the survival of the industry depends on efficient collective control of the industry (Gunningham 2011).

Third parties such as Non-Governmental Organisations (NGOs), trade unions, PIG or support groups in industry self-regulation (see DiMento 1999; Gunningham 2011; Havinga 2006; Hutter 2006; Watterson 2006) can act as a complement to government involvement in the capacity of policing and monitoring the regulatory programmes, stipulating and setting codes of practice or enforcing the regulatory programmes by taking direct actions on firms (Gunningham 2011; Hutter 2006). They also contribute to behaviour modification and information gathering (Hutter 2006), while workers who are members of trade unions fill the poor regulatory gap (Watterson 2006).

It is concluded that there is no universal approach to industry self-regulation, as it is evident that the difference in circumstances (Gunningham 2011) such as national and cultural differences (Hutter 2006) determine the success of the programme. A complementary combination of the roles of the three parties such as government

involvement, third party oversight as the NGO or trade unions do (Gunningham 2011) can be an effective option.

A form of delegated industry self-regulation, Construction Health and Safety Excellence (CHASE) partnership programme, recorded success in accident prevention and control as against the traditional command and control form of regulation in the construction industry of New Mexico, USA (Scharrer 2011; Scharrer & Bogus 2011). Although limited by data, the findings of Scharrer and Bogus (2011) support a study (Associated General Contractors — New Mexico Building Branch 2007) that reports an improvement in the H&S records of CHASE members. The findings of Scharrer and Bogus (2011) indicate that New Mexico CHASE members reported lower recordable case rates than the non-CHASE members. The assessed variables include ‘rate of: days away from work, days with transfer or restriction...’ (Scharrer & Bogus 2011). Also, textual evidence in Scharrer and Bogus (2011) show that CHASE improved: the safety culture in its member organisations, attitudes towards H&S, the relationship between the CHASE members and the local H&S regulatory agency, the perception of the workers of management commitment towards H&S.

Similarly, the success of a self-regulatory programme (Responsible Care (RC)) is reported in Finger and Gamper-Rabindran (2013). The study has tested the impact of RC on industry accidents, adducing the economic and health advantage of RC. Their findings are not limited to: Average Treatment effects on the Treated (ATT) estimates showing that taking part in RC will reduce the likelihood of all accidents by 2.99 per 100 plants per year or by 69.3% and RC/Process Safety (PS) accidents by 5.75 per plant per year or by 85.9%; averting accidents losses which as at 1990 were estimated at about 180 million US dollars per year.

Their findings, however, suggest that RC may influence the industry positively but not RC members (Finger & Gamper-Rabindran 2013). This is consistent with the overall findings of King and Lenox (2000). In particular, King and Lenox (2000) found that non-members of RC improve their relative environmental performance faster than members of RC. Correspondingly, Gunningham (1995) earlier reports a lack of commitment or decreasing support from RC members. This has been based on an empirical study in Australia, slightly covering the US (Gunningham 1995).

Notwithstanding, the arguable success of the programme has prompted an industry association to consider adopting a programme of the similar features with RC (see Finger & Gamper-Rabindran 2013).

There are, however, points against industry regulation. For instance, due to misconduct from members, previous studies found that clear punitive measures should be in place, as it will reduce the problem of adverse selection (poor performing firms joining) (King & Lenox 2000; Lenox & Nash 2003) and help to regulate approaches. King and Lenox (2000) support that: if the association cannot properly regulate the programme, members may present ‘moral hazard’ ‘...(adopting) the outward form of standard and (shrinking) the real effort required... (p. 700). To further support, Gunningham (2011) maintains that if there are no traces of government’s direct intervention, continued efficiency in industry self-regulation is at stake. The question is then asked of the adequate level of involvement in rule making and monitoring and even the statutory power of the regulator (Havinga 2006). The government can act as a catalyst, using only threats or stipulating outcome (Gunningham 2011), providing incentives to reward firms who engage in effective self-regulatory programmes (Lenox & Nash 2003). The government, trade unions and industry can develop a code of practice (Gunningham 2011).

It is argued that the design of the regulatory structure is pertinent as the regulator can play a monitoring role or an interventionist role — stepping in when deemed necessary. Lenox and Nash (2003) support this as they find that the structure of industry self-regulation, which includes monitoring and compliance strategies characterised by punitive measures fosters industry self-regulation. This, in turn, reduces ostensible membership in the industry (Lenox & Nash 2003).

Enforced self-regulation: The argument that self-regulation can be a statutory requirement or have state backing thus, a combination of public and private regulatory efforts (i.e. enforced self-regulation), is made in studies such as Ayers and Braithwaite (1992), Hutter (2001), Hutter and Amodu (2008). While it is called legally conditioned self-regulation in Witteveen (2005), studies such as to Gracia Martinez et al. (2007) refer to it as co-regulation. Further, drawing on the foregoing description of enforced self-regulation, delegated, devolved, and tacit, facilitated

forms of regulation (by Bartle & Vass 2005) in Figure 2.3 can be classed as enforced self-regulation. Also, the mandated full and the mandated partial self-regulation can be classed as enforced self-regulation. This approach seeks to have the regulated adopt regulatory status, having them prioritise the aims of regulation (Hutter 2001) so as to foster and attain risk management (Hutter & Amodu 2008). The state, perhaps through legislation, or the regulator specifies certain requirements, and organisations are to formulate adequate policies, risk management systems to achieve compliance (Fairman & Yapp 2005a; Gracia Martinez et al. 2007; Havinga 2006; Hutter & Amodu 2008; Hutter 2001). Gracia Martinez et al. (2007) report instances such as in food regulation where the policies or standards set by organisations are subject to the state or regulator's approval. Nonetheless, the regulator mostly oversees the process (Gracia Martinez et al. 2007; Hutter 2001; Hutter & Amodu 2008) and may decide to escalate the enforcement pyramid (Figure 2.1) but may not start from persuasion (Ayers & Braithwaite 1992).

Enforced self-regulation can also involve internal enforcement of the rules and monitoring of the self-regulatory systems by the business while externally, the regulator can also oversee the approach. However, if the regulated fail to cooperate by formulating adequate policies, the regulatory process is taken over by applying rules through internal social pressure using sanctions, and not by full state control as in the command and control approach (Hutter 2001; Hutter & Amodu 2008; Witteveen 2005) (also see Aalders & Wilthagen, 1997).

Albeit this approach creates interaction and coordination between the regulated and the state in the development of strategies (Witteveen 2005) and takes into account the advantages and disadvantages of pure self-regulation and state regulation to create a more robust regulatory approach, the capacity of the organisation determines its efficiency (Hutter 2001; Hutter & Amodu 2008). Indeed, enforcement of activities tends to be exclusively for the regulated (Aalders & Wilthagen 1997) and when the regulated have limited resources such as in SMEs, the approach underperforms. It is established that enforced self-regulation may prompt some elements of risk-based approach as the regulator may target those organisations lagging behind in self-regulation (Hutter 2001; Hutter & Amodu 2008). However, this may result in oversight of those that properly self-regulate who may regress to some extent.

Simultaneously, this approach places the cost of regulation on business (Hutter 2001) but they may benefit in the long run. This depends on the regulator providing information and education to sensitise the regulated in that regard. Meanwhile, it is established that the ability of this approach to combine the two extremes of regulatory paradigms presents the regulator with the advantage of assessing the risk management systems that the regulated would prepare (Fairman & Yapp 2005a; Gracia Martinez et al. 2007). The regulators will then be better informed of the challenges in the sector and can make robust rules in that regard (Witteveen 2005). Furthermore, with this approach, the risk creator is mandatorily made to assume responsibility of risks (Fairman & Yapp 2005a). After all, those who create them may better manage them.

Conversely, enforced self-regulation denies the regulated the freedom to deliberate on the regulatory process; it may present the regulated with a complicated regulatory system (Witteveen 2005). A view holds that this approach has not performed up to expectations (Witteveen 2005). In affirmation, Walls & Dryson (2002) also reported failure in H&S self regulation in the manufacturing industry in New Zealand, where only 44% of the sample have engaged in self-regulation by adhering to fundamental regulatory requirements of hazard identification. They also found that 30% have also provided H&S information in terms of welding when working in confined spaces in addition to only 8% that have provided what the authors (Walls & Dryson 2002) consider to be adequate training schemes. This can be viewed as enforced self-regulation as Walls and Dryson note that employers are statutorily responsible for the H&S of their employees and the public.

Pure-self regulation: Although self-regulation is largely between the state and the regulated (and in some cases a third party), there are a few instances where there may be no external influence. Pure self-regulation (otherwise non-state regulation in Castro 2011) in principle means that enterprises or individuals will voluntarily set standards and rules and administer, monitor and enforce them (Bartle & Vass 2005). This can come in the form of industry best practices, professional code of ethics (Castro 2011). It can occur at both organisation level and at industry level, which Castro (2011) depicts as self-policing. It depends on strategies not limited to: information from employees who act as shop inspectors, market conditions, the ability

of organisations to understand the benefits of self-regulation. Anderson and Russell (2011) and Fairman and Yapp (2005a) discuss the advantages of self-regulation in detail.

This approach promises flexibility, adequate response to market behaviour (Gunningham, 2011), transparency, and less burden on the state. Like some other self-regulatory approaches, the roles and responsibilities of experienced and knowledgeable practitioners may produce comprehensive standards and robust regulation (Gunningham 2011). It can raise standards of H&S, as it contemplates ethical standards, which in most cases exceed the confines of the law (*Ibid*).

In antithesis, views hold and/or demonstrate that pure self-regulation does not really exist in practice (Fairman & Yapp 2005b; Gunningham 2011). Even if it does, it does not fulfill all the promises, presenting weak enforcement, standards and policies (Gunningham 2011). Also it arguably leaves the regulation at the mercy of fate. On the whole, the economic and social context determines the level of the strength and weakness (Gunningham 2011) so the approach is not ruled out.

2.4.3. Summary of the regulatory models

Based on the existing literature, a conceptual regulatory spectrum is illustrated in Figure 2.4 showing that there are three sides to regulation, namely: full state regulation, state and private regulation, and solely private regulation. This is consistent with Castro (2011), but conceptualised as no regulation, co-regulation, and state regulation. Also see Bartle and Vass (2005) and Gracia Martinez et al. (2007).

From the literature reviewed so far, it is evident and demonstrative that as Tombs and Whyte (2013) pen, although no ‘...Magic bullet can tame or securitise business’ (p.759), regulatory approaches have the potentials of significantly influencing the shaping and balancing of social forces. The literature review reveals that while all regulatory approaches present opportunities and has recorded some degree of success; in some cases, they present some serious consequences and have recorded failures. As a result, most regulatory approaches reflect a mixture of two or more compliance theories. Notably, while the debate on the most appropriate regulatory or explanation

of compliance continues, the efforts in developing effective regulatory approach(es) remains significant.

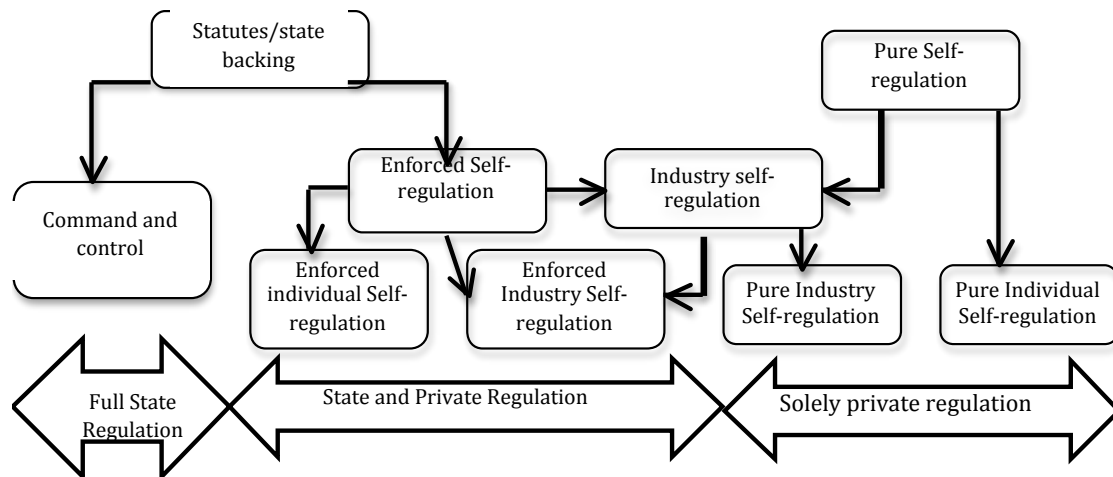


Figure 2.4: Regulatory Spectrum. Source: Author's elaboration

2.5 THE RELATIONSHIP BETWEEN COMPLIANCE WITH LAWS AND REGULATION, INCLUDING SELF-REGULATION

Drawing on the descriptions of self-regulation in Section 2.4.2.4 and the compliance-based theories in Section 2.3.2, it can be argued that there is a relationship between self-regulation and compliance with the law. This is because, firstly, enforced self-regulation can be a statutory requirement hence the need to comply with the law. Secondly, the concept of self-regulation including co-regulation is aimed at working with the regulated to develop, administer and control activities to achieve a desired established system — compliance. Even, voluntary self-regulation builds on the foregoing but without external involvement. Thirdly, self-regulation is underpinned by compliance-based theories where the involvement of the regulated is sought in the regulatory process (Ayres & Braithwaite 1992; Fairman & Yapp 2005a; Gunningham 2011). This means that factors of compliance may also be factors of self-regulation. This is pertinent and particularly helpful in achieving Objective 4 — developing a framework for analysing the determinants of construction H&S self-regulation in Chapter 5.

2.6 REGULATORY PROCESS

2.6.1 Setting policies

Setting standards involves the process of making policies and/or standards that the regulated should adhere to; it applies to the two main forms of regulation, the fixed and the flexible regulation. Thus, it can be done by any of the following or a combination of any of these: the regulator, economic actors (finance and industry), and civil actors such as NGOs. However, there continues to be a debate on the most appropriate party to set the policy so as to ensure absolute efficacy. The argument that using a voluntary code of practice as a medium for setting standards is also made by Gracia Martinez et al. (2007). They can be more rigorous when prepared by civil regulatory actors rather than by economic actors (Hutter 2006). Indeed, if economic actors set the standards especially in relation to industry self-regulation, they may be biased and weak, favouring businesses unlike when set by civil actors (Hutter 2006). The influence of large firms may be high on the stakeholders in the industry (Hutter 2006), making the aforesaid challenging. This can even raise the cost of compliance for the regulated, especially the SMEs who already struggle in the industry (see Anderson & Russell 2011). Concurrently, the interest of the public may not be adequately represented. Therefore, there can be statutory provisions for mandatory participation of SMEs in policymaking to forestall the aforesaid as Dixon et al. (2006) suggest.

Conversely, if economic actors can set standards factoring in the market and technical innovation, with their experience and knowledge, a flexible robust standard responsive to the market circumstances and technical innovation may be provided (Hutter 2001). The US model reported in Gracia Martinez et al. (2007) may be suitable. The model fosters co-regulation, as it involves the industry, the consumer group and other interested parties, which is not limited to the regulated (Gracia Martinez et al. 2007). This may, however, result in discord in the regulatory process, as the interests of the parties differ.

2.6.2 Monitoring

The monitoring roles of community regulators, local authorities, trade unions, regulators, work representatives are well documented in Watterson (2006). In some occasions where the state regulatory system is inadequate, they may take up the tasks

of the regulators such as inspection, monitoring and recording hazards and risks more than the regulator may have done (see Watterson 2006). Monitoring is an integral part of H&S management and can be adopted in self-regulation. Hughes and Ferrett (2008) write in detail concerning monitoring of H&S performance. Adopting Hughes and Ferrett's discourse for the purpose of this study, monitoring in the context of this study concerns understanding the performance of the regulatory systems by reviewing it with the whole regulatory process to ascertain ways of improving the systems. It is a continuous process and can be before incidents or after incidents (Hughes & Ferrett 2008). Gracia Martinez et al. (2007) examine monitoring in-depth in relation to self-regulation, highlighting some forms of risk assessment approach where a mechanism enables enforcement agencies to distinguish between high and low risk businesses, so as to channel adequate resources to the high risk ones. This is however subject to the efficiency of the mechanisms in place for private enterprises to achieve compliance by understanding and sustaining private standards to that effect (Gracia Martinez et al. 2007). It can also be subject to transparency and accountability of the businesses.

2.6.3 Enforcement

To achieve compliance, regulators, industries, organisations, inter alia, trade unions, can enforce the standards or policies (See OECD 2015). This can be underpinned by punishment, persuasion or a combination of both (Seljak et al. 2000) (see page xiv for the definition of the terms). This draws upon the amoral calculators, compliance theories and mixed regulatory strategies discussed earlier in Section 2.3, (but from a regulatory technique perspective), hence a brief discussion in this section. Persuasion includes advice, education, information, warning, negotiation, incentives, while punishment includes fines. Techniques such as reputation management draw upon persuasion and punishment in that it has financial and persuasion implications.

There has been a debate on whether enforcement is more effective through persuasion or punishment (for example, see Hawkins 1990; Hopkins 1995; Pearce & Tombs 1990), or a combination of persuasion or punishment (Ayres & Braithwaite 1992; Seljak et al. 2000). Hawkins (1990) argues that enforcement strategies based on cooperation and persuasion are more effective in achieving compliance with H&S laws than strategies based on punishment. According to Hopkins (1995: 461), 'Given the vast number and kinds of regulatory illegalities, it seems that some measure of

discretionary enforcement (including, in some cases, consultancy and persuasion) will be inevitable'. Also, enforcement authorities face challenges due to the high volume of SMEs in countries (Fairman & Yapp 2005a) — high resource requirement.

Conversely, Pearce and Tombs (1990) argue that enforcement based on punitive measures is more effective than those based on persuasion. One of their key arguments base on previous evidence that shows the difficulty in persuasion-oriented enforcement. They argue that the feasibility of punishment-oriented enforcement include the ability of the punitive measures to combat the capitalist nature and interest of businesses which is prioritised over social good.

An alternative perspective concludes, arguing for a combination of persuasion and punishment (for example, Ayres & Braithwaite 1992 Seljak et al. 2000), which may be a more effective model (Seljak et al. 200). However, the social, political, and economic contexts determine the balance (Seljak et al. 2000). Enforcement techniques underpinned by the foregoing philosophies are discussed below.

2.6.3.1 Incentive-based approach: Here, incentives are provided to the regulated to achieve compliance (Gracia Martinez et al. 2007). From the psychological and economic perspectives, these appear to be adequate. It encourages the good performing businesses (Gracia Martinez et al. 2007; Lenox & Nash 2003). It can, however, also attract the non-compliant ones. For example, Lenox and Nash (2003) note that regulators can reduce the frequency of inspections on good performing businesses; they can also receive preferential treatment in procurement. The use of incentives as an enforcement approach by NGOs is also covered in Watterson (2006).

2.6.3.2 Reputation management: This technique targets the image of the regulated through positive and negative publicity as to encourage or achieve compliance. From a negative publicity perspective, naming and shaming offenders by targeting the image of organisations with poor compliance levels is the overarching aim (Diugwu 2008; Fairman & Yapp 2005a b; Gracia Martinez et al. 2007). Many regulatory agencies use this to have businesses prioritise compliance (Fairman & Yapp 2005a, b). This is based on the principle that tarnishing the image of organisations (which can even increase the probability of being caught), increases the cost of non-compliance; hence,

compliance may be achieved (Fairman & Yapp 2005a). King and Lenox (2000) demonstrate how the industry self-regulation uses ‘coercive forces’ through naming and shaming of poorly performing members to achieve self-regulation. Other advocates of reputational deterrence, especially naming and shaming include Jacobi (2012), Macrory, (2010), and Nzuve and Lawrence (2012).

In antithesis, if negative publicity centres on the wrongdoings of offenders, deterrence may not be effective as this will be more about morality (Ayres & Braithwaite 1992). Furthermore, the success of negative publicity may be limited as some categories of firms or some countries may care less about their images (Umeokafor et al. 2014b). As a result, a positive publicity strategy, promoting the images of the organisations with good H&S management systems or records will be more effective than the negative publicity, as Diugwu (2008) advocates. This will not only encourage the organisations with good compliance behaviours but also has the potential of making them socially legitimate, and promoting their goods and services.

2.6.3.3 Economic regulation: This involves the regulation of economic activities of the market and/or social self-regulatory activities to achieve compliance (Fairman & Yapp 2005b; Gunningham 2011). Fairman and Yapp (2005a, b) note that the state can create markets, taxes, subsidies, *inter alia*, to regulate (Fairman & Yapp 2005b). In view of strengthening competitive levels, organisations may adopt the aforementioned. Aalders and Wilthagen (1997) go further to offer a different perspective — sheer market regulation where workers with latent occupational injuries get compensatory wage packages, thus deterring accidents and rewarding risk-bearing. Perhaps, the fate of those with non-latent occupational injuries remains uncovered. In a similar theory — Adam Smith’s model (Watterson 2006) — high staff wages makes employers control hazards and comply when it is not more economically profitable.

While this can regulate firms, it has some limitations. Firstly, Watterson (2006) contends that this leaves hazards, risk and accidents initially unchecked, prompting employers to find ways of cutting corners perhaps by employing low-paid employees or illegal immigrants who may be afraid of reporting. Secondly, of course transparency is also vital in this regulatory paradigm, but it is sensitive if not absent in

H&S (Aalders & Wilthagen 1997). Thirdly, this technique is under the false assumption that an economic dimension to regulation will achieve compliance.

2.6.3.4 Information and education: The ability of this to improve regulation irrespective of prescriptive or enforced self-regulatory requirements is noted in studies (Fairman & Yapp 2005a; Hutter & Amodu 2008; Kingston-Howlett 2001). It is underpinned by the persuasion level in Ayres and Braithwaite's enforcement pyramid (Figure 2.1). This technique, which can be informal to regulators (Hutter & Amodu 2008) encourages and motivates the regulated to comply. This can involve providing advice and training (Fairman & Yapp 2005a; Gracia Martinez et al. 2007; Hutter & Amodu 2008) or compliance messages through support groups (DiMento 1999) using social networking to transfer valuable information among members or participants (King & Lenox 2000). Fairman and Yapp (2005a) demonstrate the effectiveness of this technique when they found that SMEs in local authorities where the regulators adopt an educative approach comply with H&S laws more than the SMEs that the regulator adopts the sanction concentrated enforcement approach. The education will enlighten the SMEs, removing all complexities; they will understand what compliance is and when they are not complying (see Fairman & Yapp 2005a). This is consistent with the findings of Yapp and Fairman (2004a). Notably, the high level of ignorance among SMEs is a barrier to compliance (*ibid*). In affirmation, earlier, DiMento (1999) argues for education in achieving compliance with legislation in that scientific research can be used to demonstrate the logic in compliance.

Although this can improve H&S regulation, when the information is inaccurate perhaps from support groups, this can affect the compliance level by complicating the understanding of compliance to the regulated (DiMento 1999). Fairman and Yapp (2005a) go on to conclude that information and education cannot make management systems acceptable to the SMEs they have studied. Even when it comes from the regulator, the regulated can misunderstand the message, misconceptualising what makes compliance (Fairman & Yapp 2005a). The process of handling information is vital in designing regulatory systems, as it can have a negative impact on the limited resources of SMEs (Kingston-Howlett, 2001). Kingston-Howlett (2001) then concludes that information should be an active process: communication with the overarching aim of achieving a positive outcome on the recipient.

2.6.3.5 Inspection: This concerns the examination of the level or quality of compliance of the regulated at the state or private regulatory level or both. However, it may not always increase the compliance level of organisations. Specifically, May and Wood (2003) found that the more thorough inspections are, the lower the level of compliance. Analogously, Fairman and Yapp (2005b) found that inspection has no significant effect on the degree of compliance in SMEs studied. Inspections may not always provide the expected degree of relationship between the regulated, for example, SMEs, and inspectors. Evidence of actions taken to discourage inspectors in various parts of the world is reported in Watterson (2006) and in Nigeria, Okojie (2010). They report action ranging from murder to threats. Also, May and Wood (2003) do not statistically show that there is an additive direct effect when there is increased cooperation between the regulated and inspectors. Nevertheless, inspectors may gain information through this medium; SMEs prefer a personal source of information to other sources of information (Kingston-Howlett, 2001).

A possible explanation for the underperformance of inspection in realising compliance may include the approaches or attitudes towards inspection. Winter and May (2001) detail two aspects of inspection: formalism — sticking to the rules or ability to be flexible — rigidity (and how they are applied May & Wood 2003); coercion — ranging from sceptical inspectors who use threats to inspectors who trust the regulated and never use threats. Further, May and Wood (2003) advance the concept adding, facilitation — the enthusiasm to help and forgive the regulated. Drawing on the foregoing, there may be complications in enforcement style (May and Wood 2003). For instance, as much as formalism may achieve compliance, May and Winter (1999) in May and Wood (2003) found that to some extent, it can backfire when it is overbearing to the regulated and excessively picky (also see Winter & May 2001). On the other hand, if facilitation becomes very accommodative, it can be ineffective (May & Wood 2003). Nonetheless, the effectiveness of each enforcement style can be dependent on the other (May & Wood 2003).

2.6.3.6 Targeted enforcement: Here, the regulator targets repeated, wilful and non-compliant offenders (Markel 2012). According to Hutter and Amodu (2008), enforcers can adopt risk-rating systems, which enables them to determine their inspection methods; instincts or feelings can also be used for the aforesaid (see

OECD, 2000). This means that the level of risks that an organisation poses is considered in channeling resources through inspections thus leaving organisations with low risks (Tombs & Whyte 2012); the size of the firm is also considered (OECD 2000). It can be adequate where regulators have limited resources. According to Markel (2012), the enforcement regime may not be limited to: mandatory follow-up inspection to confirm compliance; corporate-wide agreement, corporate awareness; the regulator monitoring, tracking and targeting the above stated.

Like other technique, this technique comes with limitations. Indeed, it may only cover a small number or section of the industry, leaving those perceived to be of lower risk to continue or start breaching H&S laws. Techniques such as these are noted to present difficulties such as transparency, accountability and modification (Baldwin & Black 2007). This technique is discussed in-depth in OECD (2000) with demonstrative examples.

2.6.3.7 Sanctioning: This is the traditional use of punitive measures such as fines to achieve compliance (cf. Priyadarshini & Gupta 2003). It operates under the premise that loss as a result of fines will deter the regulated from breaching the law. It remains a core aspect of command and control but used as a last option in self-regulation (except pure self-regulation) after threats and persuasion have failed. In responsive regulation, Ayers and Braithwaite (1992) note that high punitive measures contribute to self-compliance to some extent as the level of cooperation between the regulated and the regulator is increased. However, if the regulated view the punitive measures as unfair or disproportionate, it may affect the relationship between both parties.

2.6.3.8 Negotiation: The literature discussion so far shows that this is a regulatory technique. For instance, the persuasion level in the enforcement pyramid (Figure 2.1) makes provision for negotiation to achieve compliance. Albeit, this can secure compliance, Fairman and Yapp (2005a) found that it presents a wrong perception of compliance — most SMEs they examined believe that compliance is negotiated. The respondents believe that once the agreed actions during the negotiation process are taken, compliance is achieved (ibid). The implications of this are not limited to: organisations being over dependent on the regulator for compliance; indirectly discouraging invention; more burdens on the regulator.

2.6.4 Summary of the regulatory process

To conclude, the findings of the literature review so far in this section is elaborated in Figure 2.5, covering fixed regulation and flexible regulation. It shows the process of regulation and the techniques that are adopted in the three key stages. Enforcement techniques seek to achieve compliance through persuasion or punishment resulting in a long-standing dilemma among policy makers and legal professionals. The techniques can improve compliance but not without limitations. Based on the literature discussion so far, it can be concluded that the adopted technique(s) and effectiveness of each technique or a combination of the techniques depend on the conditions, including environments and laws in the regulated environment. The regulator or regulatory actors can combine the techniques as required, use one, or drop any technique if found to be counterproductive or ineffective. This makes a case for contextualised studies as the current one will provide the contextualised understanding of the subject and even inform the improvement framework for regulation. A case for contextualised studies is further covered in Chapters, 3, 4 and 5.

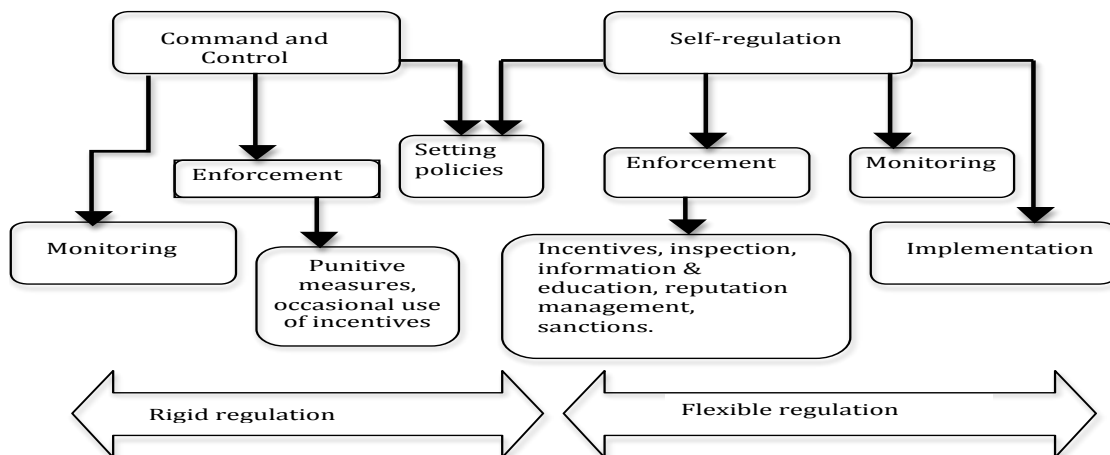


Figure 2.5 Process of Regulation: Author's elaboration

2.7 ROLES OF SELECTED ACTORS IN REGULATION

Hutter (2006) covers the roles of regulatory actors in regulations and exemplifies the contrast among the regulatory actors as follows: the state; economic actors — covering profit making organisations or actors in the market such as industry and finance institutions; civil actors — covering non-profit making and non-governmental organisations not limited to NGOs, charities.

In H&S regulation, the regulatory actors may be made up of third parties such as insurance firms, auditors and consultancy firms, trade unions, local authorities (Hughes & Ferrett 2008; Hutter 2006; Watterson 2006). For instance, Hutter (2006) discusses the roles of insurance firms in the capacity of: gathering information for effective regulation; modifying the behaviour of business by setting premiums based on performance of firms or modalities for managing risks; mandatory gatekeeping — stipulating standards as a prerequisite for insurance premium. The government makes the insurance premium mandatory.

The roles of insurance firms such as mandatory gatekeeping may financially affect small firms, as they may not have the financial capacities to meet the requirements of the insurance firms or pay the premium. This can then increase the cost of products, affecting end users. The cost implications of self-regulation on SMEs are demonstrated in Anderson and Russell (2011).

The roles of employee associations are noted in Kheni et al. (2006), while the roles of professional organisations is discussed in-depth in Hutter (2006) and trade associations in Watterson (2006). Whistleblowers, accident records, the media and other parties do influence regulation indirectly. For instance, high accident records may raise concern, and the media can play a similar role.

International NGOs and international organisations play roles that cannot be overemphasised in regulation. While Hutter (2006) demonstrates the role they can play in regulation with the use of various mediums like the media, Kheni et al. (2007) found that international clients set standards which contractors that work for them will have to comply with; this is adduced by Kheni (2008). Hughes and Ferrett (2008) discuss the roles and functions of an international organisation, ILO, in detail.

2.8 SELF-REGULATION IN DEVELOPING COUNTRIES

Self-regulation in developing countries has not adequately received attention. However, as will be seen in Chapter 3, organisations in developing countries that self-regulate are hindered by a lot of factors such as inadequate legislation, socio-cultural issues, and inadequate and dysfunctional regulatory environment.

McAllister et al. (2010) discuss regulatory style in industrialising countries in detail. They argue, building on Van Rooji's point of view: despite the success of market-based regulatory techniques and pure self-regulation in some sectors in developing countries, it should not be misconstrued to be also successful in other sectors (McAllister et al. 2010). McAllister et al. (2010) question the possible success of market-based techniques and pure self-regulation for industrialising countries because of weak state regulatory systems. Although McAllister et al. (2010) build on environmental sciences and on the industrialising countries, China, Brazil and Indonesia, it may be indicative of what can happen in developing countries' regulatory regime. Besides, industrialising and developing countries have a lot in common.

2.9 SUMMARY

In this chapter, the literature on regulation, including self-regulation and compliance theories is brought to light. The review demonstrates that regulation can be at state level, private level, and a combination of both. It goes on to evidence that there are two main forms of regulatory approaches, command and control (fixed regulation), self-regulation (flexible). However, irrespective of regulatory efforts or systems and law, compliance is not guaranteed.

The review demonstrates the discord among socio-legal scholars, and that there has been a move away from deterrence-oriented regulatory approaches to compliance-based strategies, a combination of both, or to other regulatory approaches. Self-regulation is one of the regulatory models as a result of the 'move away' from fixed or rigid regulatory models. It is most frequently adopted, but it differs from country to country and industry to industry. However, the most effective form that it should adopt or the adequate level of state involvement remains a discourse. There is evidence showing that state involvement improves self-regulation but their involvement should not be limited to enforcement as they can observe to ensure that the industries do not abuse their powers. They can endorse the laws set by the industries or partner with third parties to ensure effective regulation. Further challenges in self-regulation include bias in the representation of the regulated against that of the public; wrong motives for joining self-regulatory programmes; the inability

of regulatory actors such as industry to effectively regulate the regulated, creating avenues for governmental involvement. There are also accountability, transparency and quality issues in some self-regulatory approaches. Conversely, self-regulation is lenient, fosters flexibility in regulation, and promotes the involvement of the regulated. It also involves fewer resources and a less burdensome approach than the command and control approach. Nonetheless, given the strengths and weaknesses of the approaches and the political and economic tension in the upper echelons of regulatory affairs, they also present some insights that advance this study, which are determinants of self-regulation or compliance. The high level of leverage of non-state actors over the regulated with regard to regulation, cannot be overemphasised and is brought to light in this chapter. Earlier, the literature review has drawn a relationship between compliance with the laws and regulation (including self-regulation).

The regulatory process consists of setting standards, monitoring and enforcement. Enforcement is underpinned by persuasion and punishment but there continues to be a debate on the most suitable one to apply in the event of breach of the law, resulting in the combination of both. However, the enforcement efforts adopted should be determined by the contexts where they are used, and reviewed as needed.

CHAPTER 3: HEALTH AND SAFETY: THE NIGERIAN CONTEXT

3.1 INTRODUCTION

This chapter presents a critical review of literature on the following in terms of Nigeria: its H&S institutional arrangements; its H&S legislative context and discontent; H&S in its construction industry including its legislative context and the attitudes of the contractors towards it. These underscore research questions 1, 2 and 3, and address objective 2. This chapter formed the ‘bedrock’ of publications not limited to Umeokafor and Isaac (2015a, b, 2016), Umeokafor (2016).

3.2 HEALTH AND SAFETY: LEGAL AND INSTITUTIONAL CONTEXTS

H&S in developing countries is still in its developmental stage. Despite H&S in Nigeria dating as far back as 1789, it does not have a suitable H&S legislation. The existing pieces of H&S legislation are outdated; 'some laws relative to H&S are embedded within the country's environmental laws' (Dabup 2012: 37). At best, the H&S regulatory system is dysfunctional; at worst and in contrast, Dabup (2012) found that Nigeria does not have a legal framework for H&S. If this is the case, it is expected that the H&S of people in the workplace and its enforcement are not fostered, as evident in studies (Ezenwa 2001; Idoro 2011a; Umeokafor et al. 2014b, c, d). In particular, Ezenwa (2001) reports a case fatality rate of 2.2 per 100 injured workers, 3183 injuries, covering a 10-year period (1987–1996) in Nigerian factories. In the same vein, Umeokafor et al. (2014c) report thus: a significant under-reporting of accidents compared with Ezenwa (2001); a case fatality rate of 49.5 per 100 injured workers for an 11-year period, 2002–2012; a worrisome H&S enforcement record for an 11-year period e.g. one prosecution, eight safety precautions and 10 warnings.

3.2.1 Institutional arrangements for health and safety in Nigeria

The Factories Act F1 LFN 2004 empowers the Federal Ministry of Labour and Employment (Inspectorate Division) (LPID) to oversee H&S including enforcing the Factories Act. The LPID, with a head office in Abuja, has offices in all 36 states, including the Federal Capital Territory (FCT) of Nigeria. The Minister of Labour, among many, and the Inspector of Factories II are based at the headquarters. While State Controllers to the Assistant Safety Inspectors are based in all the states including FCT, they maintain contact with headquarters through the state controllers.

In 2006, as a requirement by the ILO standard — Occupational Safety and Health Convention, 1981 (No. 155) —, the LPID designed a national H&S policy, which highlights the responsibilities of the government agencies, employers, and employees for improved H&S. They also support stakeholders technically in relation to H&S. This is done under the supervision of the then Minister of Labour and Productivity (Akpan 2013). Based on the status quo of H&S in Nigeria, these are evidently not adequately used or ineffective in ensuring H&S. H&S in the Nigerian context requires a holistic H&S management approach, but it still centres on advancing compliance at enterprise level and enforcement of legislation (Akpan 2013).

The LPID is criticised as being inefficient, but it is understaffed and underfunded (Akpan 2013; Idubor & Oisamoje 2013; Okojie 2010). Having about 49 inspectors prior to January 2013 and about 200 (Akpan 2013) after January 2013 in a country of over 170 million suggests gross institutional failure. Worse still, the nature of enforcement by the LPID remains criticised in significant studies (e.g. Okojie 2010; Umeokafor et al. 2014c). Umeokafor et al. (2014d) also aver this in their findings. Although limited by data, it is evident from the 11-year period that Umeokafor et al. (2014c) cover, that the LPID overlooks numerous breaches of H&S laws, making their enforcement records for the 11 years showing thus that: only one person was prosecuted, eight safety recommendations were made, 10 warnings were issued, and one case yet to be investigated. Given that a case fatality rate of 49.5% of the 93 reported injuries is also a finding of the same study (Umeokafor et al. 2014c), the aforementioned punitive measures are not adequate. This is irrespective of the rationale for adopting such a lenient enforcement strategy (Umeokafor et al. 2014c). Similarly, another study (Umeokafor et al. 2014d) reports that the LPID do not comply with basic H&S legislation, which they should enforce. This is not aimed at maligning the image of LPID, but to adduce that the institutional setting of Nigeria does not provide a platform for the basic improvement of H&S.

The National Social Insurance Trust Fund Management Board, a parastatal of the Federal Ministry of Labour and Employment, is responsible for implementing the Employees Compensation Act 2010. In relation to social inclusion or involvement, the Federal Ministry of Labour and Employment has established the National Industrial Safety Council of Nigeria for the improvement and promotion of H&S in

industrial establishments. The council is made up of employers, employee representatives (who they interact with in H&S matters) and the government.

The Institute of Safety Professionals of Nigeria (ISPON), which is made up of the labour congress; Director of Factories, Federal Ministry of Labour and Employment; NECA; all work to promote H&S in Nigeria. NECA provides a platform to private employers, government and labour unions interaction. The National Industrial Safety council of Nigeria is another tripartite organisation made up of government, employers and representatives to promote H&S. Similarly, the activities of the National Environmental Standards and Regulations Enforcement Agency (NESREA) cover the construction industry in various areas such as regulating: the levels of carbon emission by heavy-duty vehicles, noise, the disposal of waste, amongst others. It is empowered by the NESREA establishment Act of 2007. The Department of Petroleum Resources (DPR) is statutorily responsible for the regulation of the petroleum industry in Nigeria, protecting the environment from destructive petroleum activities (Dabup 2012). By implication, oil and gas projects must conform with health, safety and environment requirements of DPR, NESREA, ... and the Federal Ministry of Environment (Awogbade & Mbakwe 2012: 120). According to Awogbade and Mbakwe (2012), enforcement measures include fines, imprisonment of individuals, confiscation of products and sealing of premises. DPR enforcement officers also inspect premises (*ibid*). If this is the case, then the regulation of H&S in building and construction projects in the oil and gas industry is explained. The institutional structure above shows measures for fostering H&S in Nigeria, but again, the challenging state of H&S in Nigeria indicates that they are not adequate.

3.2.2 Legislative context and its discontents

Section 2.2 demonstrates the role of the nature of legislation in regulation. Some current and prospective H&S laws in Nigeria are briefly examined below, highlighting some areas of concern.

H&S has seen the emergence of many reforms in relation to H&S laws. The earliest H&S legislation in Nigeria dates back to 1938, and most of the H&S laws in Nigeria originate from the UK. The Factories Act 1987 repealed the Factories Act of 1958 and became effective on January 31, 1990, hence is commonly referred to as Factories Act

1990. It was revised in 2004 and is known as the Factories Act, Cap. F1 LFN 2004 hereinafter. Earlier, Nigeria ratified the Occupational Safety and Health Convention, 1981 (No. 155) but as at the time of writing, it is yet to ratify C167 — Safety and Health in Construction Convention, 1988 (No. 167), which is the ILO Convention concerning Safety and Health in Construction.

3.2.2.1 The Factories Act: The existing H&S legislation is the Factories Act, Cap. F1 LFN 2004. Kalejaiye (2013) asserts this Act as the landmark of H&S legislation in Nigeria, as it properly defines the small-scale enterprise, which makes up a significant amount of workplaces. However, the Act is riddled with limitations such as the following.

The Factories Act F1 LFN 2004 in Sections 7–10 and 12 centre on sanitary, overcrowding, ventilation and lighting requirements in the workplace. However, the unspecific phrases such as ‘effective and suitable’ (9.1), ‘sufficient and suitable’ (12.1) are subject to interpretation, which is not helpful. Worse still, there is no guidance for what make ‘effective and suitable’ requirements.

The Factories Act requires the provision of welfare facilities in Sections 40, 41 and 42 and first aid boxes and a person responsible for administration (43). However, it does not require the responsible person to be trained, certified and registered, a significant anomaly of the Act. It goes further to require the provision of adequate personal protective equipment by employers (47–48) but does not specify the duties of employees in that regard. Also, the phrases: ‘suitable goggles or effective screens’ (48.1); ‘effective provisions’ (48.2); ‘adequate and suitable accommodation’ (42; also see 12) are subject to interpretation. Secondary legislation should be made to address such limitations by the Minister (9.2; 12.2). Section 49, which empowers the Minister of the Federal Ministry of Labour and Employment to make health, safety and welfare secondary legislation, supports this; but no records of these could be found.

The Factories Act 2004 requires occupiers of factories to report accidents causing injuries resulting in absence from work for more than three days or deaths of employees to the Inspector of the district of LPID in writing (51.1). It specifies a fine of a maximum of 1000 Naira (£2) if convicted of the offence, not reporting the

accidents (51.4). This penalty is among other penalties of the legislation argued to be lenient, counting as a significant downside of the legislation. This accounts for the inadequate regulation of H&S legislation in Nigeria (Idoro 2008; Idubor & Osiamoje 2013). Offenders would rather pay the fine than comply, not knowing that the indirect and direct cost of non-compliance outweighs the wrongly perceived benefits.

Furthermore, the Act needs updating. Kalejaiye (2013) writes that it does not address issues relating to health and hygiene. A review of the Act shows that it does not properly cover all aspects of the workplace risks and hazards, for instance, display screen equipment, which is mostly used in workplaces. Also, the duties of employees are not suitably covered in the Act.

Many countries such as Australia and the UK have moved from prescriptive legislation to principle-based or goal-setting legislation (Hale et al. 2013; Loosemore & Andonakis, 2007), other European countries have followed (Hale et al. 2013), but the Factories Act 2004, which is prescriptive but also vague and open to translation does not help compliance either. The downsides of prescriptive legislation are discussed in Section 2.2 — forms of legislation. The overarching point in the current section is that these anomalies do not encourage H&S in Nigeria.

3.2.2.2 Employee's Compensation Act (ECA) 2010: This provides social security for workers and their relatives (Akpan 2013). It repeals the Workmen's Compensation Act Cap. W6 LFN 2004, which is applicable to only workmen. Applicable to all employees and employers in Nigeria, including the construction industry, the ECA is designed to ensure suitable compensation for deaths, injuries, diseases and disabilities sustained due to employment, in the workplace, and related matters.

The Act specifies the reporting of (during or after work, or due to work activities) injuries to employees by employers to the National Social Insurance Trust Fund Management Board (NSITFMB) within seven days; disabling disease, occupational disease, real or alleged, within seven days of getting the information; but death due to employment should be reported immediately (Section 5 Subsections 1 & 2). However, in the Act, there are no practical provisions to address the history of the underreporting of accidents in the country, hence its efficacy is questionable.

Further, Section 33 Subsection 1 requires that within two years of the commencement of the Act, employers would contribute a minimum of 1.0% of the total monthly payroll to the Employee's Compensation Fund, which is created by Section 56 Subsection 1 of the Act. The fund will also be funded from other areas such as gift and grants from national and international bodies, and any other sources of money that the fund will realise (Section 56 Subsection 2 of the ECA 2010). The NSITFMB will manage the fund for the employer and the employee. It can be argued that the sole management of this fund by the NSITFMB is questionable. Also, modalities for enforcing the aforesaid contributions may not be adequate.

A review of the Act by Deloitte Corporate Services Limited (DCSL) (2012) also questions the management of the scheme by the NSITFMB in that the regulatory reforms have rendered the aforesaid irrelevant. This is because the NSITFMB has earlier been relieved of its duties due to its incompetence or similarities (DCSL 2012). Conversely, it can be argued that there may be reforms and/or restructuring of the NSITFMB, making it more suitable for the new responsibility. DCSL (2012) opines that having the NSITFMB to assess the employers at more than the required 1% of the monthly payroll after the first two years of the commencement of the Act (see section 34 of the ECA) leaves room for subjectivity or preference. Of course, this can result in corruption, victimisation, harassment, extortion and lack of transparency *inter alia*.

Some other significant improvements on the Workmen's Compensation Act in the ECA 2010 are not limited to Section 8 going further to make provisions for mental stress which the Workmen's Compensation Act 2004 does not cover in its definition of occupational injury. On the other hand, despite all the improvements, so many areas of the act remain grey. DCSL (2012) opines that the time for remuneration of contributions is ambiguous. Further, DCSL (2012) believes that the Act will foster negative employee behaviour, as it does not make provisions for preventing employees from intentionally engaging in risky activities or working recklessly.

Granted the critiques of the ECA Act 2010, it updates the Workmen's Compensation Act 2004 and addresses most anomalies of its preceding Act, the Workmen's Compensation Act Cap. W6 LFN 2004. Of course, this is a step in the right direction towards H&S improvement.

3.2.2.3 Propective regulatory instruments: Labour, Safety, Health and Welfare Bill 2012 and the National Building Code 2006

The anomalies in the Factories Act of 2004, the inadequate regulatory system and other factors prompted the signing of the Labour, Safety, Health and Welfare Bill 2012, but it still awaits presidential assent as at the time of writing and the National Building Code of 2006 which is also yet to be passed into law. The aforesaid Bill is designed to serve as a comprehensive H&S provision for the workplaces in Nigeria (except industries that are covered by international treaties and standards), making up for the anomalies of the Factories Act 2004. The Bill presents a homogeneous regulatory regime where the National Council for Occupational Safety and Health, National Institute for Occupational Safety and Health, National Council for Occupational Safety and Health Governing Board, National Industrial Court of Nigeria have various mandates. This is resource intensive hence a regulatory burden on the institutions with regulatory responsibilities. The Bill is highly prescriptive. Considering the history of success of goal-based legislation as against the fewer success cases of prescriptive legislation in Section 2.2, the effectiveness of the Bill in addressing H&S issues is questionable. Nonetheless, this remains a significant step in H&S regulation in Nigeria. In terms of the National Building Code of 2006, yet to be passed into law (Omeife & Windapo 2013), the building industry has been consulted in its development. It is meant to serve as the minimum for the building industry in terms of, among many, safety from the pre-design to post-construction stages.

3.3 HEALTH AND SAFETY IN THE NIGERIAN CONSTRUCTION INDUSTRY

The construction industry remains a high-risk industry recording high accidents and ill health. According to Occupational Safety and Health Administration (OSHA) (2010), one in every ten construction workers is injured every year. The incident and ill health record of the construction industry is among the highest across industries (HSE 2016; Occupational Safety and Health Branch, Labour Department (OSHBLD) 2013). For example, Table 3.1 shows that in Great Britain, the construction industry has recorded the average fatal injuries rate of 2.04 per 100,000 workers from 2010/11–2014/15 but a lower rate of 1.63 for 2015, putting the construction industry in third position.

Table 3.1 Rate of fatal injuries per 100,000 workers by main industry, averaged from 2010/11–2014/15. Source HSE (2016)

Note: The finalised rates for 2014/15 are shown in brackets.

Main Industry SIC 2007 (Section)	Employees	Self employed	Workers ¹
Agriculture (A)	7.15 (7.47)	11.40 (10.14)	9.40 (8.85)
Mining and Quarrying (B)
Manufacturing (C)	0.74 (0.56)	1.47 (1.42)	0.79 (0.62)
Gas, electricity and water supply: sewerage, waste and recycling (D,E ²)
- of which waste and recycling (SIC38)	4.98 (3.66)	. .	5.59 (4.33)
Construction (F)	2.15 (1.86)	1.87 (1.28)	2.04 (1.63)
Services (G-U)	0.17 (0.18)	0.30 (0.31)	0.19 (0.20)
All Industries (A-U)	0.41 (0.37)	1.11 (0.93)	0.52 (0.46)

¹The term ‘workers’ describes both employees and self-employed combined.

² Figures for SIC Division 38 ‘waste collection, etc.’ are also included in the overall figures for the combined sections D and E.

.. Rate not calculated as the employment estimates are small and potentially unreliable.

Apparently, the H&S record of Great Britain is better than that of many developed countries, as Figure 3.1 shows. Figure 3.1 shows that in 2013, some countries such as Estonia recorded over 3.0 incidence rate (per 100,000 employees) of fatal accidents at work compared to Great Britain, which recorded 0.51 (HSE 2016).

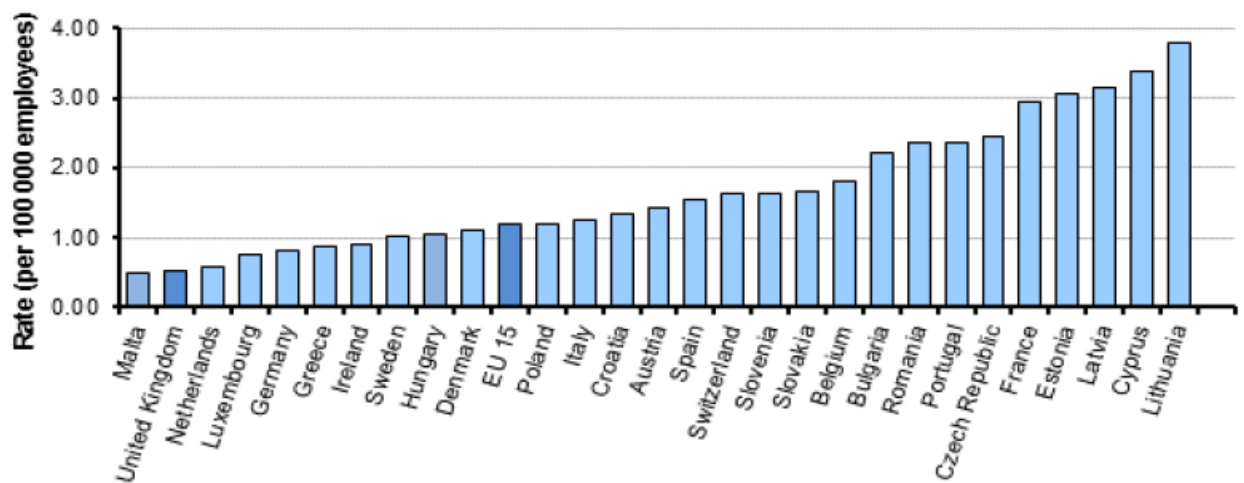
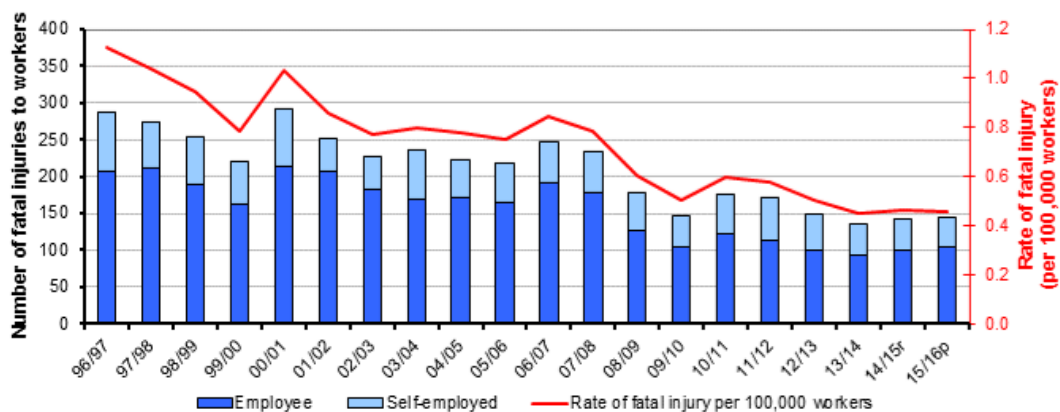


Figure 3.1 Standardised incidence rates (per 100,000 employees) of fatal accidents at work for 2013 (Eurostat): Source HSE (2016)

Of the 29 countries that Eurostat in HSE (2016) reports, only Malta has a better incidence record than Great Britain in 2013. Outside Europe, OSHBLD reports an (apparently insignificant) increase in construction industrial accidents in Hong Kong from 3112 in 2012 to 3160 in 2013 (OSHBLD 2013). Studies show the economic implications of the poor H&S records of the construction industry. In Indeed, in Great Britain, injuries and new cases of ill health as a result of construction work activities

are estimated to have cost the society about £1.1 billion in 2012/13 (HSE 2014). Also, the state of Washington in the USA spent about \$762 million between 2008–2010 on construction-related deaths and injuries (Public citizen 2012)

In contrast, efforts towards improving H&S in the construction industry have been positive. For example, the Australian construction industry has recorded an improvement in H&S between 1993–2003 (see Loosemore & Andonakis 2007). In the same vein, but in the Great Britain’s workplace, over the past 20 years, Figure 3.2 shows that there has been a reduction in the rate of fatal injury (HSE 2016). In 2015/16, 144 workers’ deaths were reported as against the average for the past five years — 155, 7% lower (HSE 2016). Authors warn that the steady improvement of accident-incident statistics in these countries such as Great Britain (Diugwu & Baba 2013) should not be mistaken for optimum accident-incident record, as the H&S record of the construction industry is still very high when compared with other industries (Fairman & Yapp 2005b).



Key: p = provisional, r = revised, the term ‘workers’ describes both employees and self-employed combined.

Figure 3.2 Number and rate of fatal injury to workers¹ 1996/97–2015/16 (provisional). Source HSE (2016)

Developing countries are no exceptions to the poor H&S record of the construction industry. In spite of a dearth of H&S data in developing countries, the little evidence alludes the worrisome accident data of the African construction industry (Okeola 2009; Puplampu & Quartey 2012). For example, in Ghana, the construction industry as at 1975 has accounted for 1,108 of the 6,064 reported accidents (Ghans’s Workmen’ Compensation Law 1987 in Kheni et al. 2010). The findings of a study in

2006 (Idoro 2011a) show that out of 100 construction workers, five were injured: the best injury per employee rate in the Nigerian construction industry. He goes further to note the best-recorded accident per worker rate for the same year to be two accidents per 100 workers (Idoro 2011a). These are higher than HSE (2016) reports for UK's construction industry accident records for 2015/16.

Based on ownership/size structure, there is evidence of discord in the H&S performance of contractors. Indeed, categorising contractors, Idoro (2011a) shows that in relation to accidents per worker rate, multinational construction contractors have recorded the least while local contractors have recorded the highest number of accidents per worker. Hence, multinational contractors are best in terms of accidents per worker rate. In affirmation, Kheni et al. (2006) assert that multinationals perform better than indigenous owned firms in relation to H&S, and Windapo & Jegede (2013) provide similar evidence in Section 1.1. In another study of 20 Nigerian construction contractors in 2006, Idoro (2007a) found that the mean for indigenous contractors for accident per contractor rate as 11, while the mean for multinational contractors is reported as eight. Idoro (2007a) also presents injury recorded per contractor rate where in the case of indigenous contractors the mean is reported as five while that of multinational is four.

However, Idoro (2007a) just like (Idoro 2011a) also reports contradicting findings. Considering the average number of injuries per respondent, multinational contractors have recorded the highest; national contractors and regional contractors at second and third positions respectively follow this (Idoro 2011a). The local contractors have recorded the least average number of injuries per respondent (Idoro 2011a). This means that multinational contractors (foreign-owned) do not out perform in relation to H&S than the indigenous owned construction firms or local contractors (Idoro 2011a). Furthermore, in relation to injuries, Idoro (2007a) found that the injury recorded per accident rate in relation to indigenous contractors presents a mean of 0.77, while the multinational presents a mean of 0.94.

Ineffective H&S management (Diguwu et al. 2012; Kheni et al. 2007), inadequate legislation (Diugwu et al. 2012; Dodo 2014; Idoro 2008), non-compliance with H&S legislation (Umeokafor et al. 2014b; Windapo & Oladapo 2012) and contextual

environment are among the factors blamed for the deplorable state of H&S in Nigeria. Diugwu et al. (2012) assert that a successful H&S system is partly dependent on effective H&S laws; they further postulate that the failed H&S system in developing countries like Nigeria is due to the non-functional H&S legislation and provisions. The nature and level of enforcement of the H&S legislation determines the ability of H&S regulation to improve H&S (Smallman 2001 in *ibid*), but this is poor in Nigeria.

3.3.1 The legislative context of the Nigerian construction industry

The activities of NESREA, DPR, and the Council for Regulation of Engineering in Nigeria (COREN) cover some aspects of construction H&S (see Sections 3.2.1 & 4.6.2). Decree 55 of 1970, which was amended by Decree 27 of 1992 now the Engineers (Registration etc.) Act, CAP E11 of 2004 empowers COREN to regulate and control engineering practices and training, registering engineering personnel and consulting firms in the field of engineering including construction consulting and engineering. They also monitoring construction process and conduct post building collapse investigation. By implication, they should ensure that construction projects are safe. Nevertheless, the activities of COREN remain minimal in ensuring the safety of workers in construction projects, as they mostly relate to ensuring that the designs of construction products are correctly transformed into construction projects. However, the extent that they carry out their duties in ensuring the safe design and construction may be marginal.

In addition to the anomalies of the Factories Act 2004 covered in Section 3.2.2.1, the Act does not protect the jobs of employees if they abstain from dangerous activities (Dodo 2014), it omits the construction sites and activities in the definition of its premises hence reported as unregulated (Famuyiwa 2011; Diugwu et al. 2012; Idoro 2008). Yet, some construction contractors adopt legislation not limited to those in Figure 3.3 from developed countries (Famuyiwa 2011; Idoro 2011a); some adopt the Factories Act 2004 and complement it with other standards. Figure 3.3 shows the key legislation related to Britain, which are examined in Idoro (2008, 2011a) in 2006; the contractors are likely to have progressed to current ones. Additionally, despite the fact that the National Building Code of 2006, which sets minimum standards for the building industry including H&S, does not have any legal backing, the construction sectors in all the states of Nigeria adopt the code (Omeife & Windapo 2013).

- Occupational Health and Safety (OHS) at Work Act (1974)
- OHS Act (1992)
- Manual Handling Operations Regulations (1993)
- Personal Protective Equipment at Work Act (1993)
- Construction Design and Management Regulations (2007)
- Control of Substances Hazardous to Health Act (1998)
- Construction (Head Protective) Regulations (1989)
- Construction (Lifting Operations) Regulations (1961)
- Construction (General Provisions) Regulations (1961)
- Construction (Working Place) Regulations (1996)
- Provisions & Use of Work Equipment Regulations (1992)
- Safety Representatives and Committees Regulations (1977)
- Noise at Work Regulations (1989)
- Construction (Health & Welfare) Regulations (1966)

Figure 3.3 Selected key primary and secondary legislation that Nigerian contractors adopt
Source: Authors elaboration, content from Idoro (2008: 279, 2011a: 158)

Drawing on the description of self-regulation in the literature, for example, Castro (2011), Finger and Gamper-Rabindran (2013), Gunningham (2011), Hutter (2006), King and Lenox (2000), the above is arguably a demonstration of self-regulation. Further, following the descriptions of the various types of self-regulation in Section 2.4.2.4, the possible forms of construction H&S self-regulation in Nigeria are described below but subject to empirical verification:

- Firstly, pure self-regulation (Section 2.4.2.4): See preceding paragraphs.
- Secondly, enforced self-regulation (Section 2.4.2.4) obtains where some firms adopt H&S standards because it is their foreign company policy, or they are bound by international H&S standards and laws that cover their parent companies abroad so they have to comply (cf. Dabup 2012; Umeokafor & Isaac 2015a).
- Thirdly, industry self-regulation (Section 2.4.2.4) arguably obtains in Nigeria in that some industries/market (e.g. Oil & Gas, and Banking,) where construction contractors operate in set mandatory requirements for all their contractors (Umeokafor & Isaac 2015a). This is standardised, a norm in the industry.
- Fourthly, client-led self-regulation; it is possible that clients such as World Bank set standards or require that contractors adopt H&S management systems in the client's projects and administer them (Kheni et al. 2007).
- Lastly, Lagos state of Nigeria has developed H&S laws and standards for the state; they enforce and monitor the compliance (Lagos State Safety Commission Law 2011). The LSSC and the other bodies including the Lagos State Building Control Agency work in a co-regulatory form with the construction industry using guides, educational programmes etc to achieve self-compliance.

Importantly, the adopted H&S legislation is criticised as inadequate (Idubor & Oisamoje 2013; Umeokafor et al. 2014b, c), irrelevant and impracticable in the Nigeria contexts (Aniekwu 2007). This is because they are not designed considering the Nigeria contexts (cf. Aniekwu 2007). This also leaves some important issues such as enforcement at adopter's discretion and the construction industry unregulated (Idoro 2008). The non-existing functional legislation in Nigeria's construction industry is believed to account for the inadequately enforced and grossly fragmented H&S framework, and the poor state of H&S in the industry (Idoro 2008, 2011a).

Despite the premise established in this section, especially the absence of a functional H&S regulatory framework, and the context issues in Chapter 4 which do not foster H&S, some construction contractors self-regulate. The reasons why these construction contractors self-regulate (or not) remain poorly understood if not unexamined.

Table 3.2 Previous studies on construction H&S in Nigeria. Source: Author's elaboration

Author(s) and year	Focus and/or scope of research	Method(s)
1. Idoro (2004)	• Impact of globalisation on safety practice and performance of Nigerian contractors	Questionnaires
2. Aniekwu (2007)	• Accident causation, accident prevention and the most violated rules and regulations.	Questionnaires
3. Olatunji et al. (2007)	• Site safety practices: level H&S awareness of safety standards and level of effectiveness of safety facilities on site.	Questionnaires, observation and interviews
4. Idoro (2008)	• OHS management efforts and OHS performance of contractors, including level of compliance with H&S legislation.	Questionnaires
5. Okeola (2009)	• Site safety practices: nature of hazards, its occurrence and control measures.	Case study of 13 projects: questionnaires and observation.
6. Adebisi and Raheem (2011)	• Safety practices in the use of construction equipment in Oyo, Kwara and Lagos.	Questionnaires, & documentation, interviews
7. Famuyiwa (2011)	• Assessed safety and compensation policies of construction firms in Lagos.	Questionnaires, documentation & interviews
8. Famuyiwa et al. (2011)	• Site Safety: purposeful on-site health services and facilities such as emergency responses and reactive measures on construction sites in Lagos.	Questionnaires
9. Idoro (2011a)	• OHS management efforts and performance of four categories of Nigerian construction contractors, including level of compliance with H&S legislation.	Questionnaires
10. Idoro (2011b)	• Site safety: influence of mechanisation on OHS performance of contractors.	Questionnaires
11. Belel and Mahmud (2012)	• Safety culture of construction workers in Yola.	Questionnaires
12. Diugwu et al. (2012)	• H&S awareness issues and the contribution of H&S regulation* to H&S awareness.	Questionnaires

13.	Famakin and Fawehinmi (2012)	<ul style="list-style-type: none"> In Lagos State, assessed H&S regulations*, e.g: degree of importance of H&S regulations*, impact of H&S regulations* on project performance and its manifestation. 	Questionnaires
14.	Okolie and Okoye (2012)	<ul style="list-style-type: none"> National culture and safety climate of construction workers in South East. 	Questionnaires
15.	Okoye and Okolie (2012)	<ul style="list-style-type: none"> The cost of H&S performance and success of projects in South East Nigeria. 	Questionnaires
16.	Tanko and Anigbogu (2012)	<ul style="list-style-type: none"> Site Safety: determinants of the use of PPE. 	Questionnaires and interview
17.	Ogunde et al. (2013)	<ul style="list-style-type: none"> Law and regulation: level of compliance with CDM regulations* by clients in Lagos State. 	Questionnaires
18.	Windapo and Jedege (2013)	<ul style="list-style-type: none"> Difference in H&S practices of contractors based size; level of compliance with H&S regulations* and incidents of fatalities on sites in Lagos. 	Questionnaires
19.	Dodo (2014)	<ul style="list-style-type: none"> H&S practices. 	Questionnaires
20.	Ekpenyong and Inyang (2014)	<ul style="list-style-type: none"> Workers' characteristics and workplace factors and the prevalence of work-related MSD of male construction workers in Uyo. 	Questionnaires
21.	Ajayi and Thwala (2015)	<ul style="list-style-type: none"> Prevention of MSD in construction workers through design in six South Western states including Lagos. 	Questionnaires
22.	Nkem et al. (2015)	<ul style="list-style-type: none"> Site safety: Unsafe conditions/act and accidents. 	Case study: review of accident and incident reports
23.	Ochieng & Zuofa (2015)	<ul style="list-style-type: none"> Safety practices: challenges & barriers, and strategies for improving safety. 	Interviews
24.	Waziri et al. (2015)	<ul style="list-style-type: none"> H&S practices on sites. 	Questionnaires
25.	Agbede et al. (2016)	<ul style="list-style-type: none"> H&S management practices in South West Nigeria. 	Questionnaires
26.	Jimoh et al. (2016)	<ul style="list-style-type: none"> Assessment of H&S planning process, Kaduna State. 	Questionnaires and observation
27.	Kukoyi and Smallwood (2017)	<ul style="list-style-type: none"> Perceptions of workers on H&S on construction sites in Lagos State. 	Interviews and observation

Keys: * Regulations are secondary legislation;
MSD: Musculoskeletal Disorders; OHS: Occupational health and safety.

Table 3.2, in showing the considerable efforts by authors to address H&S issues, it also shows that the little construction H&S literature centres on site safety and H&S management at the organisational level. Only studies 13, 17, and parts of 4, 9, 12 and 18 focus on the assessment of H&S standards or legislation, but failed to provide the indepth understanding of the compliance or self regulatory behaviours of the contractors. Admitted that research strategies and methods adopted should be fit for purpose, qualitative strategies and methods have the potential of addressing issues where context issues are inherent (Kheni 2008) or phenomena that are hard to qualify (Lundy 2013). Despite this, there is a dominance of quantitative methods in construction H&S literature in Nigeria (Table 3.2). Although not an exhaustive list,

Table 3.2 is indicative of the orientation of construction H&S research in Nigeria. It also shows that the influence of the Nigeria contexts e.g. socio-economic, cultural, on construction H&S is overlooked.

In broader term, although many studies, suggest explanations for the reasons why organisations may self-regulate or not (for example see Chapter 5), it remains poorly understood in terms of H&S, the construction industry, and developing countries. Most of the studies cover self-regulation from an environmental, and/or industrialised nation perspective, as Section 1.2 and Chapter 5 show. For example, Christmann and Taylor (2001), Giuliano and Linder (2013), Gonzalez-Benito and Gonzalez-Benito (2006), and Levinson (1987) all fall into one of the scopes in the previous sentence.

Furthermore, the literature review in Chapter 5 also shows that the studies have not covered contextual explanations to self-regulation and the link between them. Contextual environment is core in finding solutions to H&S issues in developing countries (Kheni et al. 2010). Ayres and Braithwaite (1992), Danso et al. (2015) and DiMento (1999) argue that regulatory strategies should be designed based on contextual environment. The role of socio-cultural issues is reported in Kheni et al. (2007), where some construction contractors will establish an H&S management system because of cultural values. Umeokafor and Isaac (2015a) and Chapter 4 offer a treatise on contextual influence on H&S in the Nigerian construction industry. Chapters 4 and 5 make a case for examining the discourse from construction industry and developing country perspectives.

3.3.2 Attitudes of contractors towards H&S

In Nigeria in general, H&S has received little attention (Dodo 2014). Belel and Mahmud (2012) note that construction contractors and professionals in developing countries do not prioritise H&S; it ranks low on their priority list. Idoro (2011a) echoes that the safety of construction workers is not prioritised and that the safety measures are viewed as burdensome. Some of these contractors in Nigeria fail to take responsibility for H&S, shifting the operational risks to the workers (Windapo & Jegede 2013). Even when 90% of construction workers in a study by Tanko and Anigbogu (2012) understand the importance of risk control measures such as Personal

Protective Equipment (PPE), 81% still fails to wear the PPE provided, noting issues such as discomfort, inadequacy of PPE, as excuses.

The poor attitudes of the contractors are further emphasised in another light, pointing to a ‘checklist’ understanding but also an attitude of ‘H&S on paper but not in reality’. Indeed, Okeola (2009), in a case study of 13 projects from 2000–2004 in a University in Nigeria, found trivial provisions for H&S in contract documents but in practice the case is different, as H&S is low on the priority list. With such attitudes, the poor H&S record covered elsewhere in Section 3.3 does not come as a surprise.

Conversely, Kheni et al. (2010) show a different understanding of SME contractors in Ghana, family values in particular, that fosters H&S. Similarly, considering the contexts of Nigeria, the acts of self-regulation shows a positive attitude towards H&S.

The environments that these contractors operate in determine their attitudes. Hence, in understanding construction H&S regulation in detail, it is vital to explore how this occurs, how contractors view and feel about it, and the implications of their understandings towards H&S (Ayers & Braithwaite 1992; Danso et al. 2015; Kheni et al. 2010). It can be inferred from the literature reviewed so far that the perceptions and feelings of the contractors towards H&S, could be both positive and negative. However, it remains poorly understood in terms of the regulation of construction H&S in Nigeria. Further, understanding how the Nigerian contractors perceive H&S self-regulation is logical given the premise established in Chapter 2 where, among many, there is discord on the form that industry self-regulation should take. The downsides of the self-regulatory approaches suggest that a combination of these approaches result in a complex regulatory regime.

The background established so far in this thesis, prompts the main research question: **what are the current realities in term of the regulation of construction H&S in Nigeria?** In answering this research question, the following sub-questions are posed:

- How can the current realities in approaches to construction H&S regulation be explained?
- How can the current realities in terms of the attitudes of construction contractors towards construction H&S self-regulation be explained?

- How can the current realities in terms of the determinants of construction H&S self-regulation in Nigeria be explained?

3.4 SUMMARY

Risks, hazards, injuries and fatalities in the construction industry, especially in developing countries, remain high and significant compared to other industries. In this chapter, there is evidence that the H&S record of construction contractors in Nigeria is poor. There is a critical analysis of the H&S legal and institutional context of Nigeria. The review findings indicate that the institutional arrangement for H&S is poor and the government shows little or no concern for H&S in Nigeria. The regulation of H&S, which is one of the ways to improve H&S remains a significant concern in Nigeria, as the current H&S laws in Nigeria are riddled with anomalies among which is the fact that the Nigerian construction industry is not covered by any local H&S laws. This chapter then evidences that despite the exclusion of the Nigerian construction industry in the Factories Act of 2014, and other challenges, some construction contractors in Nigeria adopt and administer H&S standards. This, according to literature, can be described as self-regulation, but the Nigerian construction industry has been viewed as unregulated. The findings of the review indicate that the regulation of construction H&S in Nigeria can be classified under industry self-regulation, pure self-regulation, client-led self-regulation and enforced-self-regulation. The influence of Lagos state of Nigeria in the regulation of H&S is also acknowledged in the review. However, there are concerns about the attitudes of the contractors towards H&S self-regulation where contractors shift H&S responsibilities to others including the workers, as the findings of the review indicate. Furthermore, the findings of this chapter indicate that contractors view H&S as low on the priority list hence pay little attention. The literature review concludes by demonstrating that the current realities in construction H&S regulation are poorly understood. The approaches to H&S regulation need to be verified or refuted and more identified (if any). The attitudes of the contractors and why they self-regulate need to be explored. The chapter highlights that most of the studies on self-regulation centre on developed and/or industrialised countries and have factored in the contexts of countries adequately. The next chapter reviews the contexts of Nigeria and its implications for H&S regulation.

CHAPTER 4: NIGERIA IN CONTEXT

4.1 INTRODUCTION

This chapter addresses objective 3 and establishes the platform for addressing objective 6. The chapter provides the in-depth understanding of contextual issues in Nigeria, creating a platform for a better understanding of the study area and the thesis, and suggests areas of consideration for effective policymaking and H&S regulation. Organisations exist in national, socio-political, cultural and institutional environments, making them susceptible to these environments (Hofstede 1980, 1991; Kheni 2008). These result in contextual issues (e.g. corruption, poor governance), which influence H&S (Idubor & Osiamoje 2013; Kheni et al. 2007, 2010; Kheni 2008; Onyeozili 2005). Consequently, developing regulatory strategies and H&S research in developing countries should be centred on understanding and factoring in contextual issues (Ayres & Braithwaite, 1992; Kheni et al. 2007).

In this chapter, there is an analysis of the physical characteristics of Nigeria and national setting followed by its government and political conditions. Economic context of Nigeria is also discussed, followed by social and institutional problems, which may threaten the economic growth and H&S development. A discussion of culture dimensions is also covered. Literature germane to the construction industry, including the indigenous and multinational contractors is adequately synthesised. The chapter concludes by demonstrating the implications of contextual issues on H&S. The chapter inspired Umeokafor and Windapo (2016) and Umeokafor (2015b & c).

4.2 PROFILE OF NIGERIA

4.2.1 Geography of Nigeria

Nigeria is located in Western Africa along the Gulf of Guinea. It shares borders with Cameroon, Niger, Benin, and Chad (Figure 4.1) and has a total area of 923,768 sq. KM (including Rivers Niger and Benue) and a total land area of 910,768 sq. KM. Nigeria is a federal republic of 36 states and one federal capital territory, and 776 local government areas (LGAs). These states and LGAs are all grouped into six geopolitical zones: North West, North East, North Central, South East, South South, South West (Figure 4.1).

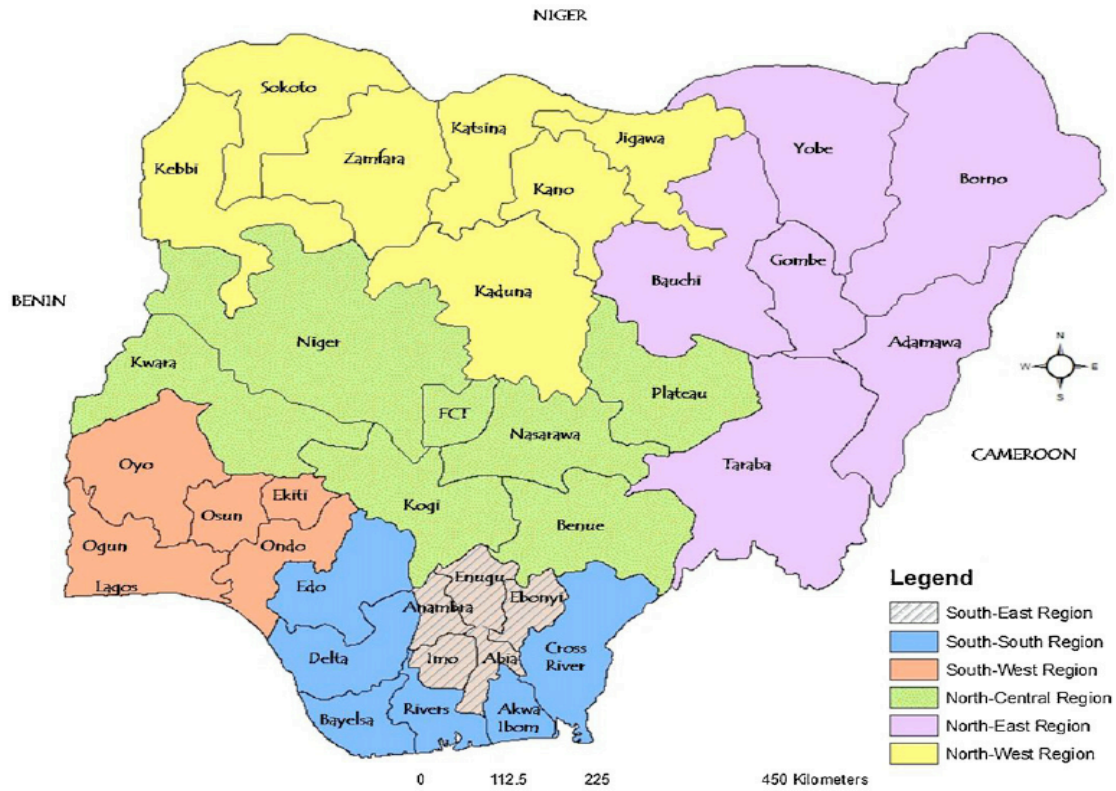


Figure 4.1: Map of Nigeria. Source: Ekong et al. (2012)

4.2.2 Demographics of Nigeria

Nigeria is the most populous country in Africa with a population of about 170 million. Dabup (2012) suggests that the increase in population results in organisations resorting to labour intensive techniques. Considering the H&S culture in Nigeria, this may result in the engineering control measures for risks being secondary. Nigeria is a diverse country with over 250 ethnic groups, with the main ethnic groups being Igbo (18%), Hausa and Fulani (29%), Yoruba (21%), Kanuri (4%), Tiv (2.5%), Ibibio (3.5%) and Ijaw (10%); other ethnic groups make up the remaining 11%. English is the *lingua franca* of Nigeria, while the other main languages are Pidgin English, Igbo, Yoruba, Fulani and Hausa. The above presents Nigeria with different beliefs, norms and perceptions about H&S and even perhaps communication gaps in the industry.

4.2.3 Government and political conditions

‘The political environment is concerned with the stability of the government, government bureaucracy, and the effect of political decisions on individuals, organisations and projects. This includes the political system, the government policies and attitude towards the business community...’ Dabup (2012: 65). According to

Dabup (2012), the above influence the decision-making and strategies in organisations.

There are three branches of government in Nigeria: executive arm, legislative arm and judicial arm. Since May 1999, Nigeria has enjoyed a stable democratic system after two major attempts at the democratic rule and many years of oppressive military rule (Onadipe 1999). Onadipe (1999) believes that both systems failed because they were not contextualised; they were adopted from the UK and USA respectively and used without creating a democratic system with a local content.

The Nigeria political system is characterised by failed leadership and the corrupt political dealings, which are well covered in studies such as Awofeso & Odeyemi (2014) and Ogbeidi (2012). Views hold that the Nigerian government remains highly corrupt and dysfunctional (see Awofeso & Odeyemi 2014; Durotoye, 2014; Maycock 2009; Ogbeidi 2012). It is common knowledge that Nigeria's political condition is characterised by electoral fraud (Ebirim 2014; Inokoba & Kumokor 2011), bribery and corruption, rigging elections, nepotism, electoral malpractice by electoral officers and party agents (Ebirim 2014) and irregularities in voting. After elections, most of the candidates end up in court contesting the election results. Of course, the implications of the government and political conditions for H&S include the lack of attention to H&S.

4.2.4 The Nigerian economy

Nigeria is the largest economy in Africa with a Gross Domestic Product (GDP) of about \$510 billion dollars (Nigerian National Bureau of Statistics (NNBS) 2014), one of the fastest growing economies in the world and the largest in Africa (National Human Development Report (NHDR) (2015)). The geopolitical zones are rich in natural resources such as underexploited coal, tin, gold, iron ore, tantalite, lead, limestone and others. Nigeria is the world's eighth largest crude oil producer and has its seventh largest natural gas reserve (Oshikoya 2008). Figure 4.2 shows the contributions of various sectors to the economy of Nigeria from 2011–2012 where telecommunication and post, building and construction recorded growth in 2012. However, agriculture makes the highest contribution followed by warehouse and

retail trade, and crude petroleum and natural gas. The oil natural and gas reserve of Nigeria is significant and it is the biggest oil producer in Africa.

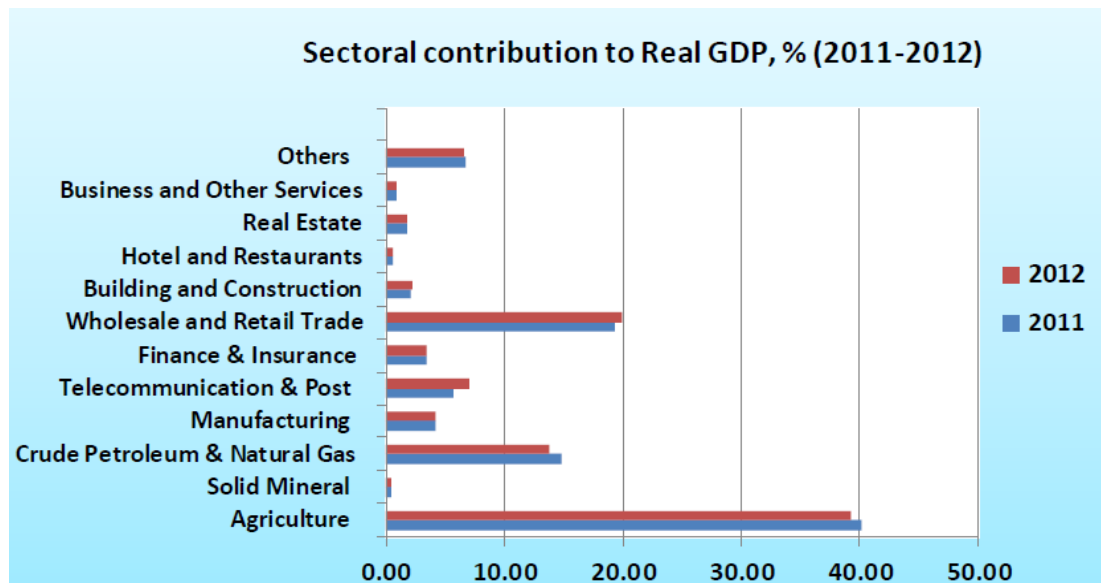


Figure 4.2: Sectoral on real GDP grown in percentage from 2011–2012. Source: NNBS (2013: 7).

According to the NNBS (2013), economic growth is expected to continue, as a real GDP, an increase from 6.61% in 2012 to 7.27% in 2014 is forecast (Figure 4.3). However, the forecasts show a decrease from 7.27% to 6.62% in 2016 (Figure 4.3). Authors claim that the construction industry in Nigeria is expected to grow by more than 15% by 2020 (Uroko 2012). However, the economic growth in Nigeria is contingent on political stability and economic reforms.

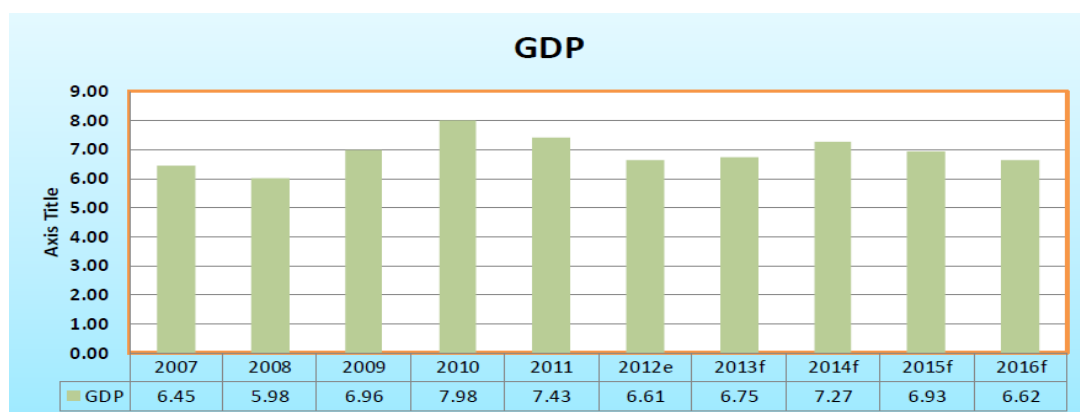


Figure 4.3: Actual and projected growth on real GDP from 2007–2016 (percentage). Source: NNBS (2013: 14).

The economic strength of Nigeria, which results in infrastructure development, also presents Nigeria with threats of increased accidents, injuries and deaths. Despite Nigeria’s oil wealth and economic prospects, the status of human development has not remarkably improved in Nigeria (NHDR 2015). Unemployment is high and there is no association between economic growth and poverty reduction (NHDR 2015). The poverty headcount ratio is 48.4 % as at 2010 (Durotoye 2014). A lot of people below the poverty line dominate the labour force of the construction industry; to them, money is primary while H&S is secondary.

4.2.5 Societal issues

Insecurity accounts for a major social issue in Nigeria (NHDR 2015). To comprehensively understand or assess human security, NHDR (2015) demonstrates that it can be classified under ‘seven realms’, — food security, health security, environmental security, community security, personal security, economic security, and political security. In a study of Nigerians, NHDR (2015) found the human security index of Nigerians is low with only the South East geopolitical zone, recording an index above 0.50 (Table 4.1). Table 4.1 shows that the North West geopolitical zone recorded the lowest security index. Kidnapping, which started in the Niger Delta region of Nigeria, has become widely spread (NHDR 2015). A lot of Nigerians feel insecure and even personally ensure their own security (NHDR 2015).

Table 4.1: Security index of Nigerians by realms: Source: NHDR (2015)

Geopolitical zone	Domains of human security							Human security index
	Health	Economic	Food	Personal	Environmental	Community	Political	
North	0.3768	n.d.	0.6087	0.5406	0.3732	n.d.	0.0448	0.3888
Central								
North East	0.2044	n.d.	0.3186	0.6904	0.2325	n.d.	0.0758	0.3043
North West	0.1583	n.d.	0.1441	0.7274	0.4361	n.d.	0.0177	0.2967
South East	0.5073	n.d.	0.8784	0.6205	0.5271	n.d.	0.1379	0.5342
South South	0.5172	n.d.	0.7895	0.4914	0.5837	n.d.	0.0685	0.4723
South West	0.5172	n.d.	0.7543	0.5772	0.3901	n.d.	0.1011	0.4680
National	0.3077	0.1838	0.5260	0.4733	0.4199	n.d.	0.0687	0.3299

Key: n.d. = No data available

While the level of insecurity poses a concern in Nigeria, corruption remains significant in Nigeria and tends to pose the highest hindrance to the development of the nation. There is sufficient evidence in studies (Durotoye 2014; Maycock 2009; Onyeozili 2005; Oyewobi et al. 2011; PRS Group 2010) that the private sector,

enforcement authorities and public sector workers have been perceived and proven to be corrupt. In particular, Durotoye (2014) adduces that Sanusi Lamido Sanusi a one time Governor of the Central Bank of Nigeria, was removed from office by the president of Nigeria in 2014 for exposing \$40 billion crude oil proceeds that were not remitted. A question can be asked at this stage if this adduces or supports the view of Oyewobi et al. (2011) that corruption may have its root in positions of power. Some other events in Nigeria such as guilty verdicts on corruption charges on serving Governors, and one time Inspector General of police, *inter alia*, may also support this. Ogbeidi (2012) presents a historical analysis of corrupt political leadership in Nigeria since independence, demonstrating the socio-economic implications of corruption in Nigeria. Transparency International (2016) ranks Nigeria 136 out of 176 in the corruption perception index. Awofeso and Odeyemi (2014) echo and establish that corruption, failed leadership, *inter alia*, have hindered development in Nigeria since independence, inhibiting foreign investments.

Maycock (2009) echoes the decay in the public sector of Nigeria, where employment and appointment are conducted using quota basis of connection. The performance of employees does not determine how they are paid, as the money is viewed as ‘national cake’ so everyone believes that it is their right (Maycock 2009). This leaves the public sector underperforming more than to the private sector. Nonetheless, she contends that the private sector is not as corrupt as the public sector as the economic benefits of transparency in their conduct are prioritised over the culture of corruption. Competition in the market and some policies set by the government also prompt transparency (Maycock 2009).

Equally important is the complex socio-political structure of Nigeria. Maycock (2009) notes that the complex social-political structure of Nigeria continues to reflect on Nigerian society today. The implications of the military rules remain evident in Nigerian business as they exhibit a culture of insecurity because of constant policy change. Nigerians have a low life expectancy of 52 years; there is unstable electric power supply, among many, poor health facilities (Durotoye 2014).

4.3 CULTURE

Views hold that culture is a fuzzy concept (Ralston et al. 2007; Triandis et al. 1998). However, Hofstede (2014) may have best-defined culture as he categorises it into national culture, regional culture, occupational culture, gender culture, organisational culture, religious culture and ethnicities culture. Culture is ‘the collective programming of the mind distinguishing the members of one group or category of people from another’ (Hofstede 1984; Hofstede & Bond 1988; Hofstede 2014). Correspondingly, all cultures are based on defined expectations achieved based on conscious mental processing otherwise cognitive ideas (Hansen & Kahnweiler 1997). This suggests possible differences in behaviour, values, opinions and way of life in general. Culture manifests in various layers: practices (symbols, heroes, rituals) and values (Hofstede 1980, 1991), and individuals can have attributes from more than one layer. These provide different platforms for interaction.

Scheffknecht (2011) examines major literature on cultural dimensions in-depth and concludes that power distance, collectivism, time orientation, gender orientation, uncertainty avoidance and gender orientation are the major cultural dimensions that differentiate culture from culture. Studies not limited to Triandis et al. (1988), Yang and Bond (1990) consistently recognise the significance of individualism and collectivism as a cultural dimension. This is because they are powerful indicators in relation to societal differences (Ralston et al. 2007).

However, the validity of some of the constructs identified by Hofstede (1980) — Masculinity vs. Femininity, power distance and Uncertainty Avoidance — remain questioned by researchers (Ralston et al. 2007). Indeed, Jones (2007) details arguments by scholars against Hofstede’s national culture dimension ranging from the data collection method, the downside of using one company for the study, the downside of using few cultural dimensions, as they do not provide sufficient information. Jones goes further to discuss the relevance of the study, the cultural homogeneity that the study assumes, the perceived unit analysis used, in that using nations is not proper, as borders do not determine culture (2007). He also views the study of Hofstede as outdated considering global changes (Jones 2007). Jones (2007),

however, concludes that despite the criticisms, the work remains remarkable and highly used by researchers and practitioners.

Conversely, Jones (2007) argues in favour of Hofstede's work covering the rigour of the study, the relevance of the study as few works have been conducted on culture as at that time. He also discussed the replications of Hofstede's work where most of the themes confirm the cultural dimension thus demonstrating the accuracy of the work. Shaiq et al. (2011) discuss the critique of Hofstede's work in detail, suggesting other cultural dimensions not limited to assertiveness, gender egalitarianism.

Nevertheless, in relation to cultural dimensions, the current study focuses on individualism vs. collectivism, long-term vs. short-term orientations, power distance, uncertainty avoidance, as literature reviewed so far suggests that they are the core to national/regional culture, organisational culture. Studies not limited to Ali (2006), Hofstede (1980, 1984, 2014), Kheni et al. (2007), Ralston et al. (2007) and Scheffknecht (2011) have used at least two of these dimensions to examine culture.

4.3.1 National culture

Regional or national culture influences multinational companies (Baba 1996; He 1995; Scheffknecht 2011), as they are not located in their cultural environments of origin. These cultural influences are unavoidable, as they determine the difference in behaviours in these companies (Scheffknecht 2011), hence cannot be neglected in a study comprising multinational and indigenous enterprises. The cultural influence is not restricted to only multinational firms but also influences indigenous firms. However, multinationals tackle many challenges, exploit the opportunities by taking into account the diverse cultural values and environment of all locations they operate in, integrating them in developing collaborative systems to establish a corporate culture for all cultures to be adopted in all their offices (Ralston et al. 2007; Scheffknecht 2011). But, the efficacy remains questionable (Ralston et al. 2007). This is because it faces strong resistance due to cultural difference in managerial systems, organisational structure and underlying philosophical and fundamental concepts of contract laws, language, tradition and religion (Baba 1996; He 1995). The dimensions below explain national culture; they mirror the possible explanations of the national culture of Nigeria with implications for the construction industry.

4.3.1.1 Cultural Dimensions

Individualism vs. collectivism: Individualism refers to a social system where ties are loose and individuals have an independent understanding of living (Hofstede 2014; Triandis 1995), underlining personal achievements and separateness (Han & Jo 2012). But in a collectivist social system, individuals have collective understanding of living; ties are close (Hofstede 2014; Triandis 1995), emphasising connectedness and collective living (Hofstede 1980; Hofstede 2014). Individualism obtains mostly in the western world and is evident in the nuclear family lifestyle while collectivism obtains mostly in the eastern world and is evident in the extended family system, cohesive in-group lifestyle. This is consistent with literature. Typically, Hofstede's (2001) analysis of a study of 72 countries including Nigeria, Ghana, and Sierra Leone, which represented West Africa, shows that the West African countries have a very low individualism index compared to western countries such as the UK. As unquestionable loyalty exists in collectivism (Hofstede 2014), the influence of higher or older members of the extended family will be emphasised in Nigeria.

These features of collectivism present the contention here as to whether this cultural dimension, which Nigeria belongs to, can be offer strengths or opportunities rather than weakness or threats. Kheni et al. (2007) in a study of a collectivist cultural dimension report a strong intertwining between the family value system and H&S management. They found that some owner/managers perceive themselves as fathers/senior members/heads of the family; as a result, they have procedures for managing H&S. They do not want 'their own' to be involved in accidents. Of course, this may be limited to few organisations because in bigger organisations, relatives of the owner/manager may be few or involved in low-risk activities. Nevertheless, Kheni et al. (2007) demonstrate the influence of collectivism on H&S management.

Power distance — the difference in power in a society (i.e. inequality in power). Better still, the level at which the less powerful in a society accept their power status; this varies in nations and society (Hofstede 1980, 1984); for instance, political power, and financial power. The aforesaid Hofstede's (2001) analysis of a study of 72 countries goes on to show that West African countries have a very high power distance as against the UK with a very low power distance. This is the highest ranked index of the West African countries.

Masculinity vs. Femininity — ‘the dominant values in the society are characterised by masculine roles or emphasise feminine roles’ (Kheni 2008: 59). According to Hofstede (1980,1984), in a masculine culture, it is expected that men should be assertive, tough and materialistic while women are expected to be fragile, shy and more interested in quality of life. On the other hand, in a feminine culture, no particular gender is expected to possess any of the aforesaid social roles. There is an overlap of social roles (Hofstede 1980, 1984).

Again, the aforesaid Hofstede’s (2001) analysis of a study of 72 countries goes on to show that the UK has a higher Masculinity index as against the West African countries who have a lower Masculinity index. Drawing on the preceding paragraph and Ali (2006: 52), the implications of Hofstede's findings include that for the UK, 'masculine stereotypes are clearly preferred and valued highly' and 'assertive and competitive behaviours (are) emphasised' while for the West African countries, the 'socially and environmentally sensitive behaviours are emphasised', and disputes are resolved by compromise and negotiation.

Long-term vs. short-term orientations — The former relates to activities that yield future reward while the latter concerns activities that result in present or past rewards. Again, the aforesaid Hofstede’s (2001) analysis of a study of 72 countries goes on to show that West African countries show a lower long-term orientation when compared to the UK which has a higher long-term orientation.

Uncertainty Avoidance — this can be high or low. It measures unclear, unstructured and unpredictable situations in relation to members of a community, showing the level of their comfort in the aforesaid (Hofstede 1984). This draws attention to the ability of people to deal with situations in the future, whether the situation takes control or they take control (Jones 2007). It is vital to note that explicit guidance and rules should constitute the structure and order in low uncertainty avoidance cultural dimension (Jones 2007).

In general, low uncertainty avoidance may occur on the grounds that it is characterised by people who are less aggressive, unemotional, more tolerant (Hofstede 1984); a system with fewer laws, little or lenient structure. However, high uncertainty avoidance is characterised by emotional, intolerant, aggressive people, no

risk takers (Hofstede, 1984); a system with more laws. The aforesaid Hofstede's (2001) analysis of a study of 72 countries yet again shows higher uncertainty avoidance than the UK.

4.3.2 Organisational culture

One common definition of organisational culture is that it is a collective programming of the mind in an organisation that differentiates it from another (Hofstede 1991). Unlike the values of national culture, which cannot easily be learned and unlearned, organisational cultural values can easily be learned and unlearned (Hofstede 2014). Scheffknecht (2011) asserts that of the three theoretical propositions of organisational culture in Table 4.2, the integration perspective is commonly perceived as the representation of the core characteristics of organisational culture. The integration perspective holds that a system of learned and shared fundamental assumptions by a group is sustained and passed on to the new employees (Schein 2010).

Table 4.2 Organisational culture perspectives. Content is adopted from Scheffknecht (2011), but designed by author.

Theoretical perspective of organisational culture	Description of organisational culture	Authors
Integration perspective	Characterised by values of executives or top management in the organisation, consistency, consensus in the whole of the organisation	Schein (1985); Collins and Porras (2002); Schultz and Hatch (1996) all in Scheffknecht (2011)
Differentiation perspective	Made up of 'overlapping, nested subcultures that coexist in relationships of intergroup harmony, conflict, or indifference'	Martin (2002) in Scheffknecht (2011) page 75
Fragmentation perspective	Views culture in organisations as ambiguous	Robertson and Swan (2003); Martin (2004)

There is a contention foremost as to whether national culture can influence organisational culture or the other way round and whether organisational culture could be understood through national culture or vice versa (Scheffknecht 2011). According to Scheffknecht (2011), organisational culture is susceptible to influence of national culture and understanding national culture can explain organisational culture. Similarly, Hofstede (2014) suggests that organisational culture may be influenced by national culture. This is evident in Hofstede's layers of culture (national level, religious/ethnic, gender, generational, social class, organisational) where people can fall into more than one layer of culture at the same time (Hofstede 1991). These

values and shared assumptions (irrespective of the layer) contribute to the development of the culture (Scheffknecht 2011), which may be any type of culture. In conclusion, organisations can be influenced by the norms and beliefs of the individuals in the organisation that make up a community (Kheni 2008).

4.3.3 Safety culture in Nigeria

As construction companies have safety culture and climate as subsets of their organisational culture and climate (Coyle et al. 1995), it may be insightful to briefly examine safety culture and/or climate. While there is no accord in the definition of safety culture and climate (HSE 2005b), there is consistency in its description or definition in considerable literature, for example, Ali (2006), Edwards et al. (2014), HSE (2005b). HSE (2005b) notes that safety climate is the psychological aspect of safety culture, which includes values, attitudes, perceptions, and beliefs of people or individuals in an organisation in terms of safety management. Safety climate can be measured subjectively at a specified time with research instruments such as questionnaires (HSE 2005b). This is further supported by Coyle et al. (1995) who view safety climate as weighing attitudes and perceptions on H&S issues empirically.

Cox and Cox (1991) opine that safety culture is the process of safety management reflecting the safety attitudes, ideas, values and assumptions of employees in a workplace. Noting the work of Glendon and Stanton (2002), Lingard (2013) describes the types of safety culture in that it can be functionalist (top-down) culture — hierarchical approach that involves top-down control to achieve uniformity. Conversely, safety culture can be interpretive — involving creating interaction among all members of the organisations both from top and bottom of management, in that culture is not to be controlled or owned by any particular group or level of the organisation (*ibid*).

The safety culture of Nigerian construction contractors remains a concern. For instance, Belel and Mahmud (2012) report a study on the safety culture of construction workers in Yola, Nigeria. They note that the workers' understanding of risk, the rules and procedures in relation to safety determine their safety attitude. In illustration, their study shows that lack of training ranks first among the causes of accidents on construction sites; this is followed by poor understanding of the work

related risks, and influence of unsafe practices by workmates which ranks third. For safety culture to develop or be sustained, there should be interaction between members of both upstream and downstream management, as noted in the preceding paragraph. Furthermore, there are factors that account for it. Mohd Saidin et al. (2008) note factors that determine the development of safety culture to include: leadership, teamwork, communication, H&S committee, training, among many, work environment, policy and safety planning.

4.4 RELIGION

Islam, Christianity and indigenous beliefs are the three main religions in Nigeria. Nigerians are highly religious people, and the influence of religion and/or superstitious beliefs cannot be overemphasised. In particular, Umeokafor (2015b) reports a study were 43.5% of the construction professionals in the study perceive accidents to be predestined; as a result, no efforts should be made to stop them. This is consistent with Idubor and Osiamoje (2013) and Smallwood (2002) who assert that some employers believe that accidents are inevitable as they are acts of God. Conversely, some employers conduct fetish rituals to stop incidents in their organisations (Idubor & Osiamoje 2013). Further, Smallwood notes that the Islamic ‘Tawhidic’ principles of justice & equality, dignity of labour and removal of hardship abhor cost-benefits-oriented interventions (2002).

Conversely, Pukenis (2014) highlights the influence of religious representatives in tackling social problems. He argues that consulting religious leaders or organisations in tackling social problems should not be overlooked. This approach is adopted in various parts of Nigeria. If this is the case, it can be argued that religion can be an instrument for H&S improvement but at the discretion of policymakers.

4.5 SOCIETAL NORMS AND VALUES

4.5.1 Kinship and family

Extended family style obtains in Nigeria, with a collectivist view of association. There are family heads, kinsmen who are influential and highly respected. Indeed, Yusuf (1998) asserts that family is an indispensable social institution, emphasising its role in social control. The extended family is highly influential on its members,

especially in the functions of its members (Yusuf 1998). In return, some extended families and societies are productive and economic units; they also provide social and psychological security for its members who are vulnerable, providing support when need be (Yusuf 1998). He further argues that they also have legal functions in the society; they help in putting values and norms in young ones. However, this close tie in the extended family system can create instability if there is bereavement or separation or divorce (Yusuf 1998), as one partner may struggle to cope having been overdependent on the other or his or her family members. It is vital to remember the findings of Kheni et al. (2007), which buttress the influence of the extended family or collectivist view of the family members of developing countries such as Nigeria on H&S management. They found that some construction contractors have H&S management systems because of family values.

4.5.2 Community Leadership

Elderly people are arguably respected in Nigerian communities so the higher a person is in the family, the more respected they are. This also covers the extended family system in that nieces and nephews arguably respect their uncles and aunties. They may go a long way in suggesting certain rules in the extended family. Also, the higher your education level in the society, the more respected you are (Kheni 2008); the same can be said of the level of one's wealth. Highly educated persons, wealthy persons, elders can be a vital medium for improving H&S in Nigeria especially in small-scale firms, considering the level of influence they have in the society. They can work with local councils to set up local bylaws in terms of H&S perhaps, just as local councils in Uganda set up bylaws in terms of natural resource (see Nkonya et al. 2005). Going by the findings of Nkonya et al. (2005), the compliance level of such local bylaws no matter how basic can be another medium for improving H&S.

4.6 THE NIGERIAN CONSTRUCTION INDUSTRY & CHARACTERISTICS

The construction industry is as old as civilisation and its market in Nigeria among the largest in Africa (Odediran et al. 2012). The operations of the construction contractors in Nigeria are categorised into multinational, national, regional and local (Idoro 2011a). The scope of operations means that local construction contractors are limited to a state; national contractors are limited to Nigeria; regional contractors are limited to one of the geo-political zones; multinational contractors are in all states of Nigeria

and abroad (Idoro 2011a). Other criteria for categorising construction contractors are ownership and management (i.e. indigenous & multinational contractors) (Idoro 2007a, 2010, 2012; Odediran et al 2012; Windapo & Jegede 2013). Nigerians fully own and manage indigenous firms, while expatriates may manage multinationals, but will be Nigerian and foreign-owned (Idoro 2007b).

The construction industry is made up of building and civil engineering operations and is characterised by the formal and informal sectors, which are on opposite sides of the spectrum. The informal sector engages in unregistered economic activities but contribute to the Gross Net Product (GNP) of countries including developing countries, significantly (Jewell et al. 2005). Indeed, in Nigeria, they contribute up to 70% of all construction projects (cosinesnigeria n.d. in Tanko & Anigbogu 2012). In contrast, the formal sector engages in activities that are registered, contributing to the economy of the country. While the percentage of their contribution to construction projects may be low, the value of the projects is very significant.

Most small dwellings in developing countries such as Nigeria are constructed by the informal sector (Kheni 2008). This sector through the help of small builders relies on family labour and self-employed artisans as the main source of labour for small clients (Kheni 2008). Kheni (2008) pens that being a labour intensive industry, the informal sector in developing countries mostly enjoys the advantage of cheap labour, avoiding the expensive option of capital/equipment intensive method. However, the labour may not be as adequately skilful as their multinational counterparts. They may not go through the formal recruitment exercise and test as their multinational counterparts. Of course, their knowledge in H&S may also be low or nil. This may, however, expose the industry to poorer H&S standards more than the formal sector.

Furthermore, the informal sector is under indigenous ownership and management, while multinational firms align to the formal sector. The formal sector enjoys the advantage of cheap labour, but also engages in activities that are capital/equipment intensive, in some cases engaging in H&S, unlike the informal sector.

Equally important is the construction supply chain of the Nigerian construction industry which Diugwu (2008) believes that if improved, can improve H&S. The

construction supply chain is used in this study as Carter et al. (1995) note: an organised process of flow of goods and services from the supplier to the customer or client, reducing the inventory and related costs all with the critical objective of meeting the need of the client or customer (Cf. Diugwu 2008). The construction supply chain is made up of clients, main contractors, project managers, quantity surveyors, engineers, main subcontractors, subcontractors and suppliers. However, effective communication among the parties of the chain is pertinent (Carter et al. 1995). Diugwu (2008) discusses the supply chain in detail, demonstrating possible reasons why adopting supply chain management in its entirety may be challenging for some industries (e.g. construction). This is further discussed in Section 4.6.3, demonstrating its impact on H&S.

4.6.1 Influence of financial stakeholders in the construction industry

The main client of the Nigerian construction industry is the government (Dantata 2007; Isa et al. 2013; Odediran et al. 2012), while private investors such as individuals and international organisations also contribute significantly. The contribution of International organisations has recently increased; they may specify good H&S records and adherence to H&S standards as a pre-requisite for successful bids. They aim at maintaining international standards, minimising some challenges posed by contextual issues. On the other hand, private investors until recently engage in small projects, but the deregulation programmes have created room for them to initiate huge projects (Dantata 2007). They may not specify strict H&S standards, especially when the informal route of procurement and execution is adopted.

For public clients, Dantata (2007) maintains that the role of the government in the construction industry goes outside financing projects. He argues that as the government encourages foreign partnership, provides the platform for acquiring of capital and technology, the construction industry benefits. However, the government does not take H&S seriously.

4.6.2 Institutional environment

Non-governmental organisations such as research institutes, trade unions, pressure groups, professional bodies, international organisations *inter alia* influence the activities of the Nigerian construction industry (Figure 4.4). From Figure 4.4, it is apparent that the contributions of the non-governmental organisations include

supporting construction workers, monitoring engineering activities, accrediting higher institutions, and pressure group roles.

- The Federation of Construction Industry is a trade/employers association, which protects the interest of its members individually or collectively in various capacities. A similar role is played by the Nigerian Employers' Consultative Association (NECA) but on a wider note, covering all private employers.
- The Nigerian Institute of Civil Engineers (NICE), the Nigerian Society of Engineers (NSE), the Nigerian Institute of Building (NIOB), the Nigerian Institution Of Structural Engineers (NIStructE), Council of Registered Builders of Nigeria (CORBON) and Council for Regulation of Engineering in Nigeria (COREN) are some professional organisations that influence the activities of the construction industry. Typically, all but the latter two are professional regulatory bodies, but they all work 'hand-in-hand', where applicable. CORBON (empowered by Degree 45 of 1989, Cap B13 LFN 2004) and COREN (empowered by COREN Degrees 1970 and amended in 1992) regulate and control engineering and building technology activities, including accrediting the Higher Institutions that provide educational programmes in the above areas. Thus, they aim at maintaining adherence to codes and standards among their members; this includes safety codes at design and construction stages. This can be by COREN's regulatory arm: Engineering Regulatory Monitoring (ERM) inspectors. This is by implication of the COREN Degrees 1970 and amended in 1992, which also means that employing, or engaging the services of person not certified by COREN is committing an offence.
- The Nigerian Labour Congress (NLC) educates, unionises, and protects workers in Nigeria in various ways, perhaps, the most influential union in the country.
- Construction and Civil Engineering Senior Staff Association (CCESSA) is an affiliate member of Trade Union Congress (TUC)
- Building and Construction Skills Artisan Association of Nigeria (BACSAAN) is concerned with the general welfare of workers such as artisans.

Figure 4.4 Non-governmental organisations that influence the Nigerian construction industry.
Source: Author's elaboration

For governmental organisations, the Federal Ministry of Works oversees the planning, design, construction, rehabilitation, supervision, maintenance and monitoring of all federal roads, engineering structures on federal roads. It has three parastatals namely: Office of the Surveyor General of the Federation — oversees surveying and mapping activities in Nigeria; Federal Road Maintenance Agency (FERMA) — monitors and maintains all federal roads in Nigeria, keeping them safe and in comfortable condition; Surveyors Council of Nigeria (SURCON) — among its activities is to regulate surveying activities. Also, the Federal Ministry of Lands Housing & Urban Development oversees housing projects in both rural and urban areas in the country. There are also ministries with autonomy at the state level in all the 36 states and FCT charged with similar responsibilities to those at the federal level. The safety and health roles of NESREA and ISPON are covered in detail in Section 3.2.1.

Claims by all the above non-governmental organisations to protect the interest of their members is not evident in relation to H&S. The accident data presented in this thesis suggests that more should be done. The roles and responsibilities of the above institutions differ, likewise their influences on the construction industry. These institutions are characterised by bureaucracy, fragmentation and dysfunctionality, hampering the development and implementation of policies (McAllister et al. 2010). Consequently, the institutions and how they affect the regulatory systems should, be seriously considered in regulatory related studies, especially regulatory style (*ibid*).

4.6.3 Major challenges of the Nigerian construction industry and implications for H&S

The Nigerian construction industry, like other industries, faces challenges, which are not limited to: lack of skilled manpower, unstable prices of materials, poor implementation of policies, political instability (Dantata 2007), corruption, unethical practices (Dantata 2007; Oyewobi et al. 2011). Oyewobi et al. (2011) opine that corruption is the major hindrance to the construction industry. They decry the effect of this on the industry, which hinders social and economic development, for example, low standards of projects, uncompleted projects, (for details, see Section 4.2.5).

The fragmentation of the construction industry in terms of workforce and professional discipline and the heterogeneity of construction projects and procurement methods, which pose challenges to the industry and H&S are well covered in literature. Specifically, Diguwu (2008) citing Beach et al. (2005) notes that the fragmentation of the construction projects and industry both affect the level of trust that exists among organisations. This apparent weak level of trust among organisations suffers when supply chain management is based on mutual trust (Diugwu 2008).

Similarly, Lingard (2013) discusses the differentiations in construction projects, covering organisational, technological and cultural differentiations and how they impact H&S in the industry in terms of decision-making at all stages of projects. She goes on to argue that lack of strong integration enables differentiation to cause a conflict of interest, ambiguity, inadequate communication, all in terms of H&S. Typically, in terms of technological difference, the different designers in the project come with different technologies and when it comes to installation, hazards may

occur due to the interaction between components (Lingard 2013). While there is a need to ensure compatibility between/among components in the construction of structures, diversity in the cultural orientation, values, objectives which exist among the participants, there remain other significant challenges to H&S (Lingard 2013).

Based on the above, scholars show the implications for H&S. Manu (2012); Windapo and Jegede (2013) demonstrate that the fragmentation of the construction industry negatively impacts on activities, hindering H&S improvement. For instance, there is a contractual arrangement for services among contractors where most contractors hired are individual workers who are hired as independent contractors by main or sub-contractors (Windapo & Jegede 2013). The employing contractor then does not provide financial security such as worker's compensation coverage (Windapo & Jegede 2013). This impacts on the health and welfare of workers in the industry.

In terms of the construction supply chain, authors note where the relationship among the parties is affected due to financial interest in that some functional groups may focus more on H&S than others, creating tension between safety and production (Dainty et al 2001; Diugwu 2008; Lingard 2013). This problem of interdependency in the construction supply chain is also established in Vrijhoef and Koskela (1999). They go on to blame the problems in the construction supply chain on myopic control, non-cooperative relationships among the parties in the chain and what they refer to as the traditional trading (Vrijhoef & Koskela 1999).

Structure advantage and gap between multinational and indigenous contractors

There is structure advantage for multinationals as against indigenous contractors and this results in a gap between the aforesaid two categories. Odediran et al. (2012) argue that despite the increase in economic contribution of the Nigerian construction industry, it has performed below expectation. They blame this on government's inadequate attention on indigenous contractors (Odediran et al. 2012); thus, indigenous contractors are unable to compete with their foreign counterparts. The evidence in the literature demonstrates that multinationals are preferred in the award of contracts (see Idoro 2010; Jimoh 2012; Odediran et al. 2012; Umeokafor 2015c). This preference for multinational contractors is because they are believed to provide a higher quality of work, have better planning and managerial skills than their indigenous counterparts (Idoro 2010; Odediran et al. 2012) (also see Jimoh 2012).

Consequently, multinational contractors execute a significant volume of construction projects (Idoro 2010; Jimoh 2012; Olugboyege 1998); this can be over 90% of the value of the construction projects in Nigeria (Ministerial Committee on causes of high government contracts 1982 and Olateju 1991 in Idoro 2010). This is despite multinational contractors being about 7% of the construction contractors in Nigeria (Ogunpola 1998 in Ogbu 2011). It is also despite the legal advantage in procurement that the indigenous contractors have over multinational contractors (Ogbu 2011). Typically, section 34 paragraph 1 of the Public Procurement Act of 2007 states that there should be the ‘... *margin of preference in the evaluation of tenders, when comparing tenders from domestic bidders with those from foreign bidders...*’ pg 23 (also see Ogbu 2011). A similar legal advantage is in Section 3 paragraph 2 of the Nigerian Oil and Gas Industry Content Development Act, 2010 (Ogbu 2011).

Furthermore, multinationals are preferred in the award of loans. Odediran et al. (2012) found that indigenous contractors hardly secure bank loans hence personally funding the projects as far as they can. This makes bidding for contracts challenging and may even lead to the compromise of standards.

The premise established so far contributes to explaining the financial advantage of multinational firms over their indigenous counterparts. This, in turn, impacts on H&S, supporting the findings of Windapo and Jegede (2013) where there is a significant difference in the H&S practices of the multinational and indigenous SMEs contractors in Nigeria. As a result, SMEs prioritise saving cost at the expense of H&S practices (Windapo & Jegede 2013). Drawing on this Chapter and Chapter 3, Figure 4.5 summaries the factors impacting on contractors emerging from the literature review.

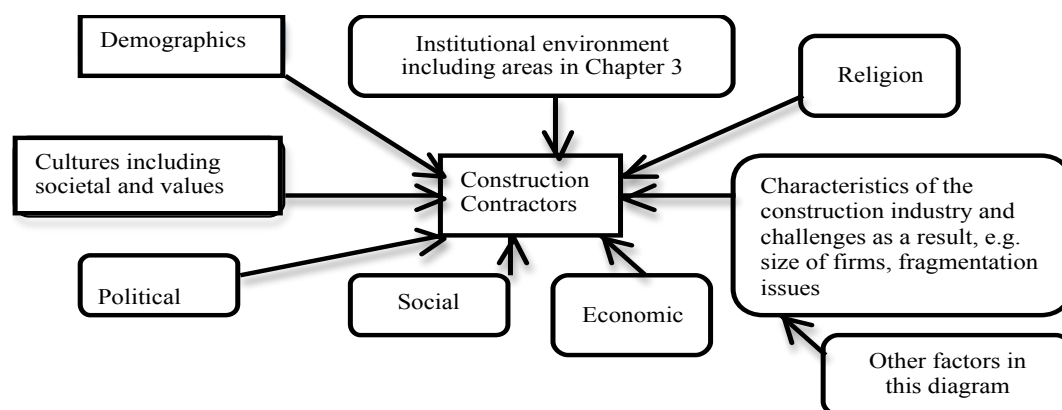


Figure 4.5 Summary of factors impacting on construction contractors: Author’s elaboration

4.7 SUMMARY OF REVIEW AND IMPLICATIONS OF CONTEXTUAL ENVIRONMENTS FOR H&S REGULATION

The economic, social, political, institutional, cultural contexts are characterised by non-implementation cultures, bureaucratic systems, and dysfunctional institutions, insecurity at various realms, corruption and poor governance. The values, perceptions feelings and behaviours of the Nigerian society do not foster safety culture. Consequently, as the Nigerian construction industry operates in these environments, they are susceptible to them, and studies show the influences of these environments on H&S performance of these contractors (Kheni 2008; Kheni et al. 2007, 2010; Umeokafor et al. 2014b). In particular, Onyeozili (2005), Idubor and Osiamoje (2013) assert that bribery and corruption, political influence and weak legal structure hinder regulatory activities such as OSH. In affirmation, the high level of corruption in Nigeria's upper echelon of power in Section 4.2.3, which is adduced and exemplified in Section 4.2.5 fuel the continuous neglect of H&S by the government. Even when the ineffective H&S regulator in Nigeria is carrying out the little duties it does, people in the upper echelon of power in Nigeria hinder them because they have interests in some defaulting organisations (Umeokafor et al. 2014c). This, in turn, may account for the findings of Umeokafor et al. (2014d) where the regulatory agency in Nigeria breaches H&S legislation that it should enforce. For the implications of poor H&S regulatory framework and H&S institutional influence, see Chapters 2 and 3.

The populace do not feel the economic growth in Nigeria, as unemployment and poverty remain significant. The implications of this are that H&S is least on the list of some clients who manage to fund projects. Construction workers are willing to work under any conditions provided there is an income; hence, contractors and the construction industry exploit the workers, depriving them of their rights in terms of H&S. This contributes to the low human security index in the seven realms where Nigerias are insecure in terms of health (minimum protection from diseases), environment, food (physical and economic access to basic food), the community (protection from the 'loss of traditional relationship and values and ethnic violence', personally ('protection from physical violence'), politically (a society that honours of human rights) and economically (basic income) (NHDR 2015: 8–9). Of course, H&S is likely to be low priority on the agenda of many Nigerians.

Nonetheless, irrespective of the negative implications of contextual factors for H&S in Nigeria, the antecedent literature suggests room for optimism. For example, the characteristics of national culture — the religious orientation of the Nigerian society can be used as an avenue for promoting H&S. At least religious groups can make the moral arguments for H&S. Although religion does not support all aspects of H&S (Idubor & Osiamoje 2013; Smallwood 2002), it can be used with caution. Furthermore, some cultural attributes in Nigeria, community leadership, kinship and family present potential for improving H&S (Sections 4.5.1 & 4.5.2). However, the above is subject to a robust and pragmatic contextualised regulatory system.

Meanwhile, SMEs (indigenous firms) are integral in the development of every economy and it is evident that the contextual environments of Nigeria tend to impact more on them. The cultural attributes of Nigeria are characterised by undervaluing and marginalising indigenous contractors, while the corporate cultures of multinationals are leverage to them. Further, the literature suggests that this is because indigenous firms are more susceptible to certain contextual issues than their multinational counterparts. The implications of this according to antecedent literature review are not limited to: an underperforming sector in the construction industry; the prospective contribution of the sector to the economy of Nigeria being adversely affected; the state of H&S continually being challenged; the reputation of the sector continually being in disrepute. Indeed, it widens the gap in H&S performance between indigenous and multinational construction firms, giving multinationals undue advantage. Lastly, the literature review shows that fragmentation of the workforce and supply chain, differentiation in projects and relationship among parties are among the generic challenges of the construction industry which impact on H&S.

A holistic view that engenders contextual influences in Nigeria in designing frameworks for H&S and regulatory activities is lacking. Indeed, little attention is paid to the political, social, economic, institutional and cultural contexts of developing countries including Nigeria. Until adequate attention is paid to the influence of the external environment of organisations in policy design and implementation, the efficacy of laws and regulation remain in question. This adequate attention is exactly among what the current study does.

CHAPTER 5: A FRAMEWORK FOR ANALYSING THE DETERMINANTS OF CONSTRUCTION HEALTH AND SAFETY SELF-REGULATION

5:1 INTRODUCTION

This chapter, which draws on the points established in the previous chapters including the contextual factors in Chapter 4, critically reviews literature germane to the determinants of self-regulation, compliance with laws, to develop a framework based on theory and evidence. The framework is for analysing the determinants of construction H&S self-regulation, achieving objective 4. The framework was validated by experts and academics and published in a conference proceeding (see Umeokafor & Isaac 2015a).

5.2: EXPLORING THE DETERMINANTS OF HEALTH AND SAFETY SELF-REGULATION

5.2.1 Determinants of compliance with legislation

As there is a relationship between compliance with laws and enforced self-regulation (Section 2.5), a synthesis of literature on compliance with laws is conducted and partially used for developing the framework. Table 5.1 presents a summary of many studies on the determinants of compliance with legislation. It is, however, not an exhaustive list, as it is impracticable to provide an exhaustive list within the confines of this study. The theoretical perspectives in Section 2.3.2 explain most of the factors in Table 5.1, but some, such as social motivators, may not be well explained. Studies have analysed the mode of influence or behaviour of the factors and categorised them accordingly presenting more dimensions to explain compliance than seen in Section 2.3.2, for example, Nielsen (2003), Peterson and Diss-Torrance (2012), and Winter and May (2001).

Table 5.1 Selected studies on determinants of compliance with legislation. Source: Author's elaboration

Author(s) and year	Sector(s) and Location	Determinants extracted/examined
Arimah and Adeagbo (2000)	Building construction — Urban development and Planning <i>Nigeria</i>	<ul style="list-style-type: none"> • Institutional context of urban development and planning legislation: Foreign, inadequate and outdated legislation Rigid, reactive, elitist and restrictive legislation No public consultation or participation in planning process. No interest from government and professional bodies to ensuring effective strategies. • Administrative machinery for plan implementation: Absence of inter-agency coordination among plan implementation bodies.

Author(s) and year	Sector(s) and Location	Determinants extracted/examined
		<p>The state planning authorities are faced with: lack of finance, lack of skilled person power, political influence, lack of equipment.</p> <p>The enforcement branch of the regulator is faced with: lack of funds, molestation of staff, shortage of staff, inadequate attention from the main regulator.</p> <ul style="list-style-type: none"> • Public: <ul style="list-style-type: none"> Poverty Low level of literacy Lack of interest from the public towards planning agencies Expensive, circuitous and slow plan approval process. • Enforcement styles of front line inspectors • Compliance capacity: combination of knowledge of legislation and good working relationship between inspector and the regulated • Cost of compliance
May and Wood (2003)	Construction <i>USA</i>	<ul style="list-style-type: none"> • Enforcement styles of front line inspectors • Compliance capacity: combination of knowledge of legislation and good working relationship between inspector and the regulated • Cost of compliance
Nielsen (2003)	Fisheries <i>Denmark</i>	<ul style="list-style-type: none"> • Industry structure: economic performance, fleet capacity, fleet composition, geography, and demography. • Control and enforcement: type and dimension of control and enforcement activities. • Internal obligations made up of two main areas, firstly: <i>Legitimacy</i>: procedure - participation: organisation, representation; process- openness, accountability, effectiveness; outcome - distribution, complementarities, coherence. The second area is Moral/Norms: group behaviour, social pressure, individual behaviour, individual expectation.
Nielsen and Mathiesen (2003)	Fisheries <i>Denmark</i>	<ul style="list-style-type: none"> • Economic gains to be obtained • Type of enforcement- deterrence and sanctions • Compatibility between legislations and fishing practices and patterns • Level of meaningfulness of legislation as perceived by the regulated • Efficacy of imposed legislations • Norms (behaviour of other fishers) and morals • Decision-making procedures in regulatory processes as perceived by the regulated
Priyadarshini and Gupta (2003)	Environment <i>India</i>	<ul style="list-style-type: none"> • Weak enforcement — non-existent and merely formal inspection • Nature of regulation — absence of flexibility in regulatory style- Command-and-Control; over-ambitious laws and standards • Inadequate monitoring • Inadequate punitive measures — penalties are not proportionate to the breach of legislation • Inadequate funding
May (2004)	Construction <i>USA</i>	<ul style="list-style-type: none"> • Lax enforcement to attract investments • Inspection practices: inspection toughness; consistency; perceived likelihood of sanctions • Attitude and beliefs: reputational influence; level of trust in inspection process by the regulated; Need for legislation • Ability and Constraints: knowledge of legislation; size of firms; experience of building; quality of homebuilding
Yapp and Fairman (2004b)	Food businesses –SMEs <i>England and Wales</i>	<p><i>Barriers:</i></p> <ul style="list-style-type: none"> • Lack of personnel and time • Lack of knowledge or understanding of legislation • Lack of trust in legislative requirements and inspectors • Lack of adequate manpower • Lack of fund • Lack of awareness of food problems • Lack of motivation • Lack of effective management systems <p><i>Motivators:</i></p> <ul style="list-style-type: none"> • Moral duty to comply • Quest to protect reputation of firm

Author(s) and year	Sector(s) and Location	Determinants extracted/examined
Laeque et al (2006)	Health- Natural Health Products <i>Canada</i>	<ul style="list-style-type: none"> • Legal duty to comply • Deterrent Fears- profit driven • Duty to comply: perceived legitimacy of legislation; the principle of individuals or firms otherwise moral or normative motivation. This is the obligation to comply to avoid doing the harm non-compliance will bring to people. • Social motivations- based on winter and May (2001) see below • Ability to comply: the size of firm, the location of firm, knowledge of legislation, technical resources of firm, attitude and belief of the regulated, enforcement activities of the regulator.
Kirchler et al (2008)	Taxation	<p><i>Economic factors:</i></p> <ul style="list-style-type: none"> • Audit probabilities • Fine- interpretation of fines • Tax rate <p><i>Normative factors:</i></p> <ul style="list-style-type: none"> • Subjective knowledge and participation in decision process of taxation • Attitude towards taxes • Personal, social and national norms • Perceived fairness
Akpalu (2011)	Fishing <i>Ghana</i>	<p><i>Determinants of noncompliance</i></p> <ul style="list-style-type: none"> • Increased enforcement efforts by regulator • Increased penalty • Age of fishers • Legislation perceived as unfair by the regulated • Economic state (poverty): higher discount rate, financial responsibilities of fishers. • Fishers' perceived social pressure
Othman (2012)	Construction <i>South Africa</i>	<ul style="list-style-type: none"> • Lack of commitment by management • Poor leadership by safety officers • Lack of awareness of importance by clients and management • Lack of supervision • Poor choice of sub-contractors –appointing unskilled and uninformed sub-contractors
Sarkheyli et al (2012)	Building construction <i>Iran</i>	<p>Determinants of noncompliance</p> <ul style="list-style-type: none"> • Awareness level: lack of awareness of legislation, lack of awareness of the importance of the legislation, unawareness of violation. • Social motives • Economic motives: perceived benefits of noncompliance, quest to reduce construction cost. • Supervisory issues: the probability of being caught, slow process of getting building approval.
Umeokafor et al. (2014a)	Construction <i>Nigeria</i>	<ul style="list-style-type: none"> • Organisational issues: reputation of firms, higher profit margin, inadequate training of staff and workplace issues, management commitment to H&S, gross negligence by government or/and enforcement authority. • Institutional/legal issues: inadequate legislation, enforcement of H&S regulations; weak legal structures, bribery and corruption, lack of funding, absence of H&S representatives, lack of adequate regulations, neglect of human rights, fear of legal sanctions. • Socio-economic issues: unemployment; lack of awareness and improper medium for disseminating information • Socio-cultural issues: beliefs, culture, client's influence, moral values. • Industrial issues: tendering process, the perception of stakeholders in the industry, cost of compliance/production, the activities of the informal sector.

Winter and May (2001) present a pragmatic and robust dimension to understanding the determinants of compliance with legislation. They examine compliance, hypothesising using the elements of compliance theories and testing them. Winter and May (2001) while writing about compliance motivators in relation to Danish farmers detail direct motivators of compliance thus:

Calculated motivation — the regulated weighs the perceived benefits of compliance, the cost of compliance, and the likelihood of detection and decide if to comply or not; only to comply when the benefits of compliance (including avoiding sanctions among others) exceed the cost of compliance (Section 2.3.1 discusses this in detail).

Normative motivation — stems from the regulated's internalised values where the regulated considers the appropriateness or legitimacy of a legislation or the regulatory activities or a regulator. The regulated will also comply with the law if based on its moral standards, it considers it as an obligation or duty to comply (Section 2.3.2.1 also discusses this).

Social motivation — the regulated complies with legislation so that the party they interact with (such as regulator, trade associations, community) will acclaim or appreciate them. The study by Winter and May (2001), however, focuses on one aspect of social motivation which only relates to the interplay between the regulated and the inspectors (Winter & May 2001) thus more of enforcement and deterrence. This mostly suggests one source of social pressure or influence: the regulator, opining enforcement style as a determinant of compliance. Social motivators can be viewed in other aspects with no or little element of social pressure from the regulator. Winter and May (2001) then go on to relate social motivation to social pressure in that pressure can come from trade association, media, public interest groups, competing firms among others.

Ability to comply — financial ability to comply; knowledge of legislation – understanding the requirements of legislation where the nature of legislation can determine the understanding.

In affirmation of Winter and May (2001), numerous studies have also explained compliance indirectly or directly framing their work around Winter and May (2001). Specifically, Nielsen's framework for analysing compliance is based on: economic concept (cf. with calculated motivators in Winter & May (2001) and deterrence theory

in Chapter 2); sociological and political theories — normative factors: legitimacy of legislation and enforcement activities, personal moral (cf. Winter & May 2001) and experience; institutional economics. In furtherance of normative motivation, Nielsen (2003) notes the work of Andersen (1994) and Giddens (1984) in that norms can create negative and positive sanctions, as they are social pressures. This also shows a relationship between the factors.

Analogously, Peterson and Diss-Torrance (2012) examine the motivation for compliance with environmental laws in detail also covering the motivations of compliance which studies such as Winter and May (2001) examine. Confirming the motivators, Peterson and Diss-Torrance (2014) replicate and extend these motivators. May (2004) also examines factors of compliance in detail, grouping them into affirmative determinants and negative determinants.

Equally important are other possible extensions to compliance motivation. Winter and May (2001) go on to note indirect compliance motivators. These appear in three extensions thus: i) attitudinal, educational and income; ii) the relationships among the direct motivators of compliance afore-discussed; iii) considering the conditional influence of awareness of legislation as a core aspect of compliance model (Winter & May 2001). Importantly, ‘ii’ is factored into the development of the framework for analysing the determinants of H&S self-regulation in the construction industry.

In Table 5.1, Nielsen and Mathiesen (2003) uphold that economic factors significantly explain non-compliance with regulations in fisheries. They also note that if fishers are more involved in the decision-making process of regulation, they have a stronger incentive to comply. This is because they believe that involvement in the management system makes it legitimate thus co-management (Hatcher & Gordon 2005). Fishers view non-compliance as moral if they question meaningfulness of the legislation and their level of involvement in regulatory activities (Nielsen & Mathiesen 2003).

Equally important are the findings of Laeeque et al. (2006). In a study of Natural and Health Products (NHP) industries, Laeeque et al. (2006) found that the ability to comply (also see Winter & May 2001) may be the major motivator for large firms

because they have resources fully in place to comply unlike those that the SMEs have. This is alongside large contractors having more concern for their image than SMEs.

Although Wu (2009) is not in Table 5.1, its contribution to understanding compliance is worthwhile mentioning. Wu (2009) empirically evidences the influence of the factors on various compliance levels (over compliance and non-compliance) of regulatory standards of legislation. These are not limited to: competitive pressure, cost and risks of adopting regulations, environmental values and beliefs of upper management. They also found limited evidence that regulatory pressure contributes to over-compliance.

To conclude, it is evident from the literature reviewed so far including Table 5.1 that most factors in fall into the categories of ability to comply, calculated, normative, social motivations, regulatory factors. These explanations of compliance are consistent with theoretical explanations of some determinants of self-regulation.

5.2.2 Determinants of self-regulation

The determinants of industry self-regulation are discussed in detail in King and Lenox (2000). They show that in industry self-regulation without specific sanctions, satisfactory adherence to the self-regulation programmes such as RC can be achieved through the following. Firstly, coercive force where indirectly using force to meet the standards of the programme. This can be through naming and shaming of firms that are not performing up to expectation. It is also possible to use social sanctions as Braithwaite (1989) in King and Lenox (2000) notes. Secondly, normative forces: where the norms and values in guidance codes of self-regulatory programmes can change the activities of the regulated for the better. Lastly, mimetic forces: this is social-related where networking can be used as a medium for disseminating information for improving the activities of the regulated.

Gonzalez-Benito and Gonzalez-Benito (2006) review some factors that determine environmental proactivity, where environmental proactivity is ‘ understood as the voluntary implementation of practices and initiatives aimed at improving environmental performance ...’ (p 88). This is analogous to pure-self-regulation. They conclude with the following main factors: **company features**: company size,

internalisation, position in the value chain, managerial attitude and motivations, strategic attitude; **stakeholder pressure**: external and internal stakeholders, primary and secondary stakeholders; **external factors**: industrial sector, geographical location. These factors are not independent (Gonzalez-Benito & Gonzalez-Benito 2006), who go on to demonstrate stakeholder pressure as the vital and principal factor.

Giuliano and Linder (2013) is another significant study, which examines motivations for self-regulation in the US. Giuliano and Linder (2013) developed a framework of motivations of self-regulation based on theories and possible evidence from environmentally responsible behaviour literature and have tested it (see Table 5.2).

Table 5.2: An illustration of motivations to self-regulation based on theories and possible evidence. Source: Adopted from Giuliano and Linder (2013) and modified.

Theory	Evidence
• Social legitimacy	• Changes to public expectations and perceptions of Ports' roles and responsibilities and their responsibility for environmental externalities; ports' strategies to increase or achieve legitimacy
• Social pressure	• Advocacy group engagement, community mobilisation, lawsuits, negative press
• Threat of regulation	• Legislative proposals; political discourse, regulatory agency efforts
• Business case	• Cost saving, customer preferences.
• Altruism	• Engaging in environmentally responsible behaviours because it is the right thing to do.

In Giuliano and Linder (2013), albeit there are some elements of state/regulator involvement, no formal agreement exists between them; thus, this is more of a voluntary programme. It can also be argued to be industry self-regulation but with a little element of state influence. The motivators in Table 5.2 are consistent with many factors in Table 5.1 and Winter and May's (2001) study, supporting the relationship established between enforced self-regulation and compliance with legislation in Section 2.5.

Specifically, Giuliano and Linder's study empirically evidence that social legitimacy, social pressure, and the threat of regulation significantly contribute to their respondents' decision to self-regulate. Although not all the motivations are empirically evidenced in their study, all the motivations are adopted in developing the current conceptual framework. This is because as much as all the motivators may not be evidenced in the US, they may be evidenced in Nigeria.

Social pressure in Table 5.2 is the action of external parties that can determine the actions of an organisation (Giuliano & Linder 2013). The sources include consumers, investors, shareholders, NGOs, (Giuliano & Linder 2013) trade association, media, public interest groups, among many, competing firms (Winter & May 2001). From an industry pressure perspective, King and Lenox (2000) demonstrate that targeting the image of firms through naming and shaming can improve industry self-regulation (also see 2.6.3.2). This can be viewed as social pressure, as the public, the media and public interest groups may directly or indirectly pressurise the organisation into self-regulating by targeting their images. This can also mostly underpin the coercive force paradigm (King & Lenox 2000). Conversely, promoting the image of firms that have good H&S self-regulatory records can also improve or prompt H&S self-regulation (cf. Diugwu 2008).

The next in Table 5.2 is the threat of regulation. Giuliano and Linder (2013) present this as when an organisation may decide to go above required standards to impress the regulator, avoid stricter regulations, improve their relationship with the regulator or even gain competitive advantage of economic gain. This is viewed as preemptive moves (Giuliano & Linder 2013). This is consistent with economic gains and the fear of regulator's activities as determinants of compliance with legislation and/or social motivations (see Peterson & Diss-Torrance 2012; Winter & May 2001).

The proper economic rationale for self-regulation in Table 5.2 is the business case. Giuliano and Linder (2013) demonstrate these to be activities that are profit oriented. This can be engaging in efficient operations that have the potential to save cost; for example, introducing new environmental friendly products (Giuliano & Linder 2013). This can also increase social legitimacy and even improve the image of the firm as the society may view it as being environmentally friendly (Giuliano & Linder 2013). It is equally important to note that Giuliano & Linder (2013) conclude that the determinants in Table 5.2 are interrelated.

The last in Table 5.2 is Altruism — engaging in environmentally friendly behaviours because it is the right thing to do (Giuliano & Linder 2013) — morality. That is what an organisation perceives as proper, desirable and appropriate. This is consistent with

normative motivation in studies not limited to: King and Lenox (2000), Laeque et al (2006), Nielsen (2003), Nielsen and Mathiesen 2003, Winter and May (2001).

A strong argument that globalisation positively influences environmental self-regulation is made by Christmann and Taylor (2001). Their study of 118 firms in China examines if the type of ownership — multinational and domestic firms — and customer linkage determine self-regulation. It should be recalled that multinational and indigenous contractors are the categories of ownership in the Nigerian construction industry (Section 4.6). Another way to advance the argument that globalisation can determine self-regulation is that multinational firms in developing countries are likely to use domestic suppliers or subcontractors so may exert pressure on them to self-regulate (Christmann & Taylor 2001). This can be by setting minimum requirements that they will meet if they are to work with or for them. This obtains in the Nigerian construction industry but this may only be limited to projects or contracts involving the multinational firms. This suggests the influence of supply chain in self-regulation; Diugwu (2008) and Walters and James (2009) discuss supply chain in terms of H&S in-depth. Diugwu (2008) strongly advocates that influences in supply chain relationship are better for improving H&S minimum requirements in organisations compared to relying on regulatory measures. The discourse in this paragraph contributes to the industrial case in Table 5.3 and Figure 5.1.

Christmann and Taylor (2001) go on to demonstrate that globalisation (global norms) can prompt self-regulation. For instance, companies from developing countries (where there are low or no environmental standards) that export to developed countries with high environmental standards may have to develop or adopt standards that meet those of the developed countries they export in order to sell their products in them. The argument can be made in terms of construction H&S where clients from developed countries may consider it to be immoral to purchase buildings or award contracts to firms with poor H&S records, making them self-regulate. It is possible to classify this under social pressure, underpinned by morality.

In the UK, Levinson (1987) identifies various dynamic, complex and interacting internal and external factors influencing H&S joint self-regulation in non-manufacturing and public sector (local authority). However, she tells us that these

factors can be relevant to other organisations. Specifically, in terms of internal factors, Levinson (1987) states that organisational structural influence (i.e. bureaucracy) determines the strategies that trade unions and management in H&S joint self-regulation adopt. It is vital to note that she has examined three main agents of self-regulation, safety representatives, supervisors and safety committees. Her study considers the role of employees in self-regulation as pertinent (Levinson 1987).

Furthermore, the industrial relations climate is another factor that may influence the strategy that safety representatives (electives from the workforce) adopt in H&S joint self-regulation (Levinson 1987). Findings of Levinson suggest that where unionisation characterises the organisation, the trade union and the management adopt a mixture of consultation and negotiation strategies (1987). This may be because organisations that support unionism may already have the welfare of their employees as an organisational value, which may have prompted them to support unionism. After all, unionism is about the welfare of the employees. This suggests the importance of co-operation between management and safety representatives, and unionisation as vital factors in self-regulation. It can be viewed as social pressure (in Table 5.2) and social motivation (in Winter & May 2001) as a result of unionisation. Levinson (1987) conceptualises consultation as when the aim of the management and trade unions are the same or similar, while negotiation occurs where the basic aims are different.

Another internal factor that Levinson (1987) discusses is the level of management commitment to H&S as a determinant to joint self-regulation. Her findings show that 71 percent of safety representatives and 91 percent of supervisors receive support from senior management. She considers the exemplification of commitment by management and their support to trade unions as an avenue to facilitating and encouraging the cooperative consultative joint approach in H&S management. The level of management may, however, depend on normative motivation (Winter and May 2001) and social legitimacy (Table 5.2).

In terms of external factors of H&S joint self-regulation, Levinson (1987) notes the following: the legal framework in an organisation, unemployment, a tight budget and economic recession. Additionally, she is of the view that economic constraints, lack

of money may change the priority of employees or the management; as a result, the safety representatives may not have the full support of both. On the other hand, it may make the employers comply more with OSH because they may want to avoid direct and indirect cost-economic perspective.

Cashore et al. (2005) report a study where data from Canada, Germany and the US have been used to investigate the factors that make firms prefer and/or adopt a particular regulatory scheme — forest certification. Forest certification presents two regulatory approaches where Forest Stewardship Council (FSC) Certification involves a non-state private regulator (such as environmental groups) while other forest certification schemes employ self-regulation - ISO 14001 among others (Cashore et al. 2005). A significant aspect of FSC is that it is a private regulatory scheme for forest management but voluntary and presents non-discretionary and strict national and regional minimum requirements. One of the other schemes they have examined shows stronger traits of pure self-regulation, for example, ISO 14001 certification, which the regulated adopts voluntarily (Cashore et al. 2005).

The finding that economic factors or market factors do not determine the choice of regulatory programmes of their respondents is also noted in Cashore et al. (2005). *Ibid* also found that the normative factors contribute to preference and participation in a form of industry self-regulation — FSC. This is on the grounds that the respondents perceive a programme to lead to amelioration of the environment more than the others (morality), and because it will reduce external pressure (Cashore et al. 2005) (social pressure or motivation or industrial pressure). Morality and social pressure are in line with authors (King & Lenox 2000; Giuliano & Linder 2013) in Table 5.3, for example, Laeeque et al. (2006), Nielsen and Mathiesen (2003).

Results from Cashore et al. (2005) also show that firms participate in ISO- self-regulation again because of environmental benefits and to avoid external pressure but will prefer and will be willing to register to ISO not because of the perceived cost or downsides of the programme. The latter (cost disadvantage) however contradicts the general notion that cost may deter an organisation from self-regulation (see Cashore et al. 2005). This may be explained by the environmental benefits of the programme.

From a global perspective, Cashore et al. (2005) draw attention to indicative ways of understanding the behaviours of multinational construction contractors in Nigeria. Specifically, although they find that international market forces do not determine the respondents' preference for a particular regulatory programme, they note that there is evidence that the more firms export to Asia, the higher the likelihood that they will purely self-regulate ISO (see Cashore et al. 2005).

Meanwhile, while reviewing literature on 'corporate greening', Cashore et al. (2005) note some factors of firm's participation in the voluntary regime — self-regulation. While Cashore et al. (2005) recognise the inefficiency of the use of sanctions to achieve forest certification, they demonstrate factors which can be categorised under organisational case, economic case or market case, social pressure or social motivation in Figure 5.1 and Table 5.3 determine forest certification. These factors are also consistent with determinants of compliance with legislation and factors of self-regulation, which this Chapter discusses in detail.

5.2.3 Implications of the literature review for research

To conclude, literature review so far in this Chapter demonstrates significant steps by many scholars towards understanding compliance and self-regulation, exemplifying the factors of self-regulation. It is clear that the determinants of self-regulation (and compliance with laws) vary from country to country, industry to industry, self-regulatory programmes-to-self-regulatory programmes, and from self-regulatory approaches-to-self-regulatory approaches. For example, the general notion and theory that the high cost of self-regulation deters firms from self-regulation was not supported in the study of Cashore et al. (2005).

As in some cases, the review also shows locations of the studies and the sectors, it is evident that the extant body of knowledge comes from other industries such as environmental management and from developed economies. It is, however, possible that there may be studies that may come from the construction industry or developing countries, but the literature search and reviews do not show such studies. The search strategy of reading only the abstract during the search sessions so as to decide the ones to choose may also mean that only those that mainly deal in the subject in the abstract were found. However, this is acceptable, as an abstract is a summary of the

content of an academic material. Despite the contrary, if there is a study that examines the discourse, it may not be as in-depth as the current study.

Considering the following: the need for having contextualised studies in developing countries (Ayers & Braithwaite 1992; Danso et al. 2015) especially in H&S (Aniekwu 2007; Kheni et al. 2010) where Kheni et al. (2010) argue that the solution to the challenging state of H&S in developing countries lies in understanding the contextual environment of developing countries; the strong argument of Danso et al. (2015) argues against copying models or frameworks from other countries; the uniqueness of the construction industry means that no projects are the same (Alhajeri 2011); the features or challenges of the industry such as fragmentation of the workforce (Manu 2012) and construction supply chain (Diugwu et al. 2014) and differentiations in organisational, technological and cultural issues (Lingard 2013), and that self-regulation varies from country to country and from industry to industry can be seen in studies such as Casto (2011), it is concluded that the determinants in literature will not be transferable to the construction industry especially in Nigeria. This is where the H&S regulatory environment is dysfunctional as studies such as Diugwu et al. (2012), Idoro (2008) demonstrate. It is vital to note that the literature discussion in Chapter 4, where the characteristics of Nigeria are covered, including the construction industry and challenges, some of which are peculiar to Nigeria, also makes a case for the above conclusion for a contextualised study of Nigeria. Importantly, the current study will contribute to the small body of literature on H&S in developing countries, as there is a dearth of H&S literature in developing countries (Diugwu et al. 2012; Idoro 2011a; Puplampu & Quartey 2012; Umeokafor et al. 2014a). Furthermore, a study of this nature will also validate or refute the framework in this chapter. Consequently, **sub-research question 3 is asked again:** How can the determinants of H&S self-regulation in the Nigerian construction industry be explained? With such a comprehensive review, it is logical to consolidate the review output and develop a framework for analysing the determinants of self-regulation in the construction industry.

5.3 DEVELOPING THE FRAMEWORK FOR ANALYSING CONSTRUCTION HEALTH AND SAFETY SELF-REGULATION DETERMINANTS

This section factors in the contextual environment of Nigeria in Chapter 4, the determinants of self-regulation and compliance (including theories) covered so far in this thesis to develop a conceptual construction H&S self-regulatory determinants analysis framework. By doing this, objective 4 is achieved. The framework (Figure 5.1) is a composition of various theories and evidence of the determinants of various approaches to self-regulation. Typically, Table 5.1 (and the theories in Winter & May 2001) account for enforced self-regulation; Giuliano and Linder (2013) and Gonzalez-Benito and Gonzalez-Benito (2006) cover pure self-regulation. Also, the work of Cashore et al. (2005) supports the framework from an industry self-regulatory dimension.

5.3.1 Validation of the framework for analysing H&S self-regulation determinants

Umeokafor and Isaac (2015a), which this chapter has inspired, offer a treatise on the framework that is presented in this chapter. Although, Umeokafor and Isaac acknowledge that the framework can be further validated, they have validated the framework through various means such as expert validation (2015a). Also, in line with Manu (2012), the peer-review process that the paper has gone through is a process of academic validation (Umeokafor & Isaac 2015a). Nevertheless, the framework was further validated during data analysis in Chapter 8. It has also shown determinants or the different pattern of relationship among the determinants that the conceptual framework may have omitted. Developing a framework based on theories and evidence is consistent with studies such as Giuliano and Linder (2013), Lynes and Andrachuk (2008), Nielsen (2003).

5.3.2 Analytical design of the framework

Table 5.3 combines some theories and evidence based on literature review to suggest further explanations to Figure 5.1 and further details of the factors. Thus, constant reference is made to it in discussing the framework.

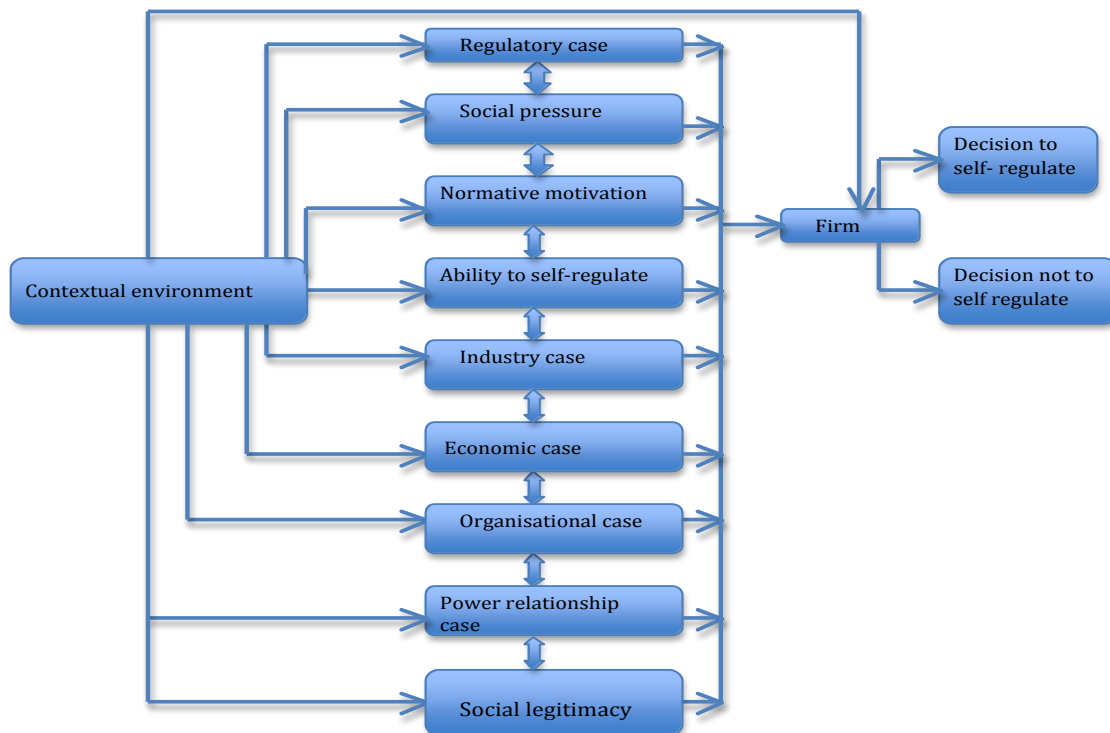


Figure 5.1: A construction H&S self-regulation determinants analysis framework
 Source: Author’s elaboration (cf. Umeokafor & Isaac 2015a)

5.3.2.1 Hypothetical relationships among the elements of the framework

Figure 5.1 shows that most of the direct determinants of self-regulation are interrelated. This is consistent with Giuliano and Linder (2013), Gonzalez-Benito and Gonzalez-Benito (2006), Winter and May (2001). In illustration, the regulatory case such as the nature of legislation (complexity of legislation), determines how the regulated will perceive the legislation, normative motivation, and ability to self-regulate. Also, regulatory efforts determine how the regulated will perceive the activities of the regulator, normative motivation. The market/industry which can determine management and transaction cost (Nielsen 2003) can also determine the ability of the regulated to self-regulate. Evidence in Table 5.3 adduces the relationships among the elements of the framework. Indeed, Table 5.3 shows competitive pressure, which may make firms self-regulate to meet up with competition. Conversely, it can encourage them not to self-regulate so as to save cost. Competitive pressure can also increase the level of management commitment to H&S (organisational case); it can also spur or increase social pressure in terms of stakeholder pressure.

Table 5.3: A summative illustration of Figure 5.1, indicating determinants of H&S self-regulation in Nigeria's construction industry based on theories and possible evidence. Source: Author's elaboration.

Theory	Selected possible evidence
• Economic case	Calculated cost benefit, calculated loss due to damage of image, cost of stoppage in production due to punitive actions or incidents
• Normative motivation	Perceived fairness of legislation, perceived fairness of regulatory activities, morality- duty to self-regulate (self-regulating because it is right).
• Ability to self-regulate	Knowledge of legislation, financial capabilities, the regulated is unable to comply with laws
• Social pressure	Public pressure groups, pressure from trade union and/or association, community pressure, pressure NGOs, lawsuits, advocacy group pressure, pressure from the media
• Regulatory case	Nature of legislation, regulatory efforts, regulatory policies, level of external involvement, level of regulatee's participation.
• Organisational case	Corporate culture, management commitment, perception of stakeholders, structure of ownership, scope of operation, organisational norms, organisational culture, size of company.
• Industry and/or market cases	Competitive pressure, supply chain issues or activities, institutionalisation of minimum requirements, pressure from global market, large contractor influence on subcontractors, industry structure.
• Power relationship	Financial power, political influence, social 'connection' or status, corruption.
• Social legitimacy	To increase or achieve social legitimacy by changing the activities, roles and responsibilities of the regulated.

5.3.2.2 The elements of the framework

Contextual environment: As stated in Figure 5.1, contextual factors (such as religion, societal norms and values, culture, colonial influence, bribery and corruption, bureaucracy, government and political conditions, industry specific issues) in Chapter 4 and the generic regulatory challenges in Chapter 2 are factored into the development of the framework. It shows that contextual environment has direct influence on the elements or determinants of H&S self-regulation and on the firms.

Indeed, this thesis demonstrates that social, political, cultural, economic and institutional environments of Nigeria present Nigeria and its construction industry with unique features, which resonates on H&S (Figure 5.1). It determines the behaviours of direct determinants of H&S self-regulation and even the behaviour of firms. For example, the H&S regulatory regime in Nigeria, the H&S legislative contexts of Nigeria inter alia present the construction industry with a heterogeneous, dysfunctional H&S regulatory arena. This in turn goes on to hinder H&S regulation and even influence the ability of the regulated to self-regulate. Also, corruption, another contextual factor, highly influences the regulation of H&S and many institutional activities in Nigeria and even the construction industry. Unlike in countries where the level of corruption is low, the implications of corruption that

Chapter 4 demonstrates are not experienced. This societal issue that is high in the upper echelon of the Nigerian society highly reflects on the attitudes of the Nigerian government towards H&S.

Further, in Figure 5.1, under contextual environment, is the role of religion, which is under-examined in Nigeria, perhaps because of its sensitivity. Religion goes a long way to shaping the moral stance of the regulated and may reflect on their norms, which is normative motivation. However, the positive effects of this may not be evident in Nigeria despite the fact that the populace are highly religious as the societal issues in Section 4.2.5 are not a true reflection of good morals. Nigerians may always find some arguments to morally justify their actions or attitudes towards H&S; thus it becomes a norm and socially acceptable. In terms of culture as a contextual factor in Figure 5.1, section 4.3.1 demonstrates how culture can influence the construction industry covering areas such as cultural dimensions.

Industry case — Drawing on sections 5.2.1 (including Table 5.1) and 5.2.2, Figure 5.1 shows the market and/or industry case, and Table 5.3 details them. These are also well discussed in studies such as Cashore et al. (2005), Christmann and Taylor (2001) and King and Lenox (2000). Indeed, it is worth remembering that the findings of Cashore et al. (2005) in the context of international market or economic case, organisational issues are discussed in Section 5.2.2. The industry case mainly relates to the activities in the construction industry and/or the market that the contractors operate in that determine their decision-making process in terms of H&S self-regulation. In particular, in the Nigerian construction industry where industry self-regulation occurs (for example in the oil and gas sector), Christmann and Taylor (2001) argue that institutionalisation of minimum requirements in the industry can determine self-regulation. Firms may require that their suppliers adopt self-regulatory measures so as to ensure that the quality of their works or products is not compromised (Christmann & Taylor 2001).

It is also possible that pressure due to the competitive environment of firms can make firms self-regulate. Citing studies (Christmann 1998; Kostova & Zaheer 1999) Christmann and Taylor (2001) demonstrate that institutional pressure can determine environmental self-regulation in that the reputation of multinational firms and the

expectations of the public that they will perform better than domestic firms put pressure on multinationals to self-regulate. This can also be classed as social pressure. The industry can also adopt social sanctions (Braithwaite 1989 in King and Lenox 2000) to drive improved industry regulation.

Furthermore, large firms may directly or indirectly pressurise smaller firms to self-regulate. Nonetheless, this may not be as effective as expected as the level of their response depends on the ability to self-regulate. Cashore et al. (2005) note studies that empirically support the resistance of small firms to the pressure from large firms. It is possible in this element of the framework that some organisations may self-regulate because others are self-regulating. This can be more in line with the social pressure case that is discussed below. Other factors in this case are not limited to industry structure such as geographical location (Gonzalez-Benito & Gonzalez-Benito; 2006 Nielsen 2003 in Table 5.1).

Organisational Case — Drawing on section 5.2.1 including Table 5.1, and 5.2.2, and detailed in Table 5.3, this relates to the internal activities and structure and size of an organisation. In some cases, this can be corporate culture, which is highly influenced by the structure of ownership. Christmann and Taylor (2001) maintain that the type of ownership determines self-regulation hypothesising and testing that it determines the likelihood that multinational firms will adopt an environmental self-regulatory programme. The hypothesis is supported by the result of their study (Christmann & Taylor 2001). Many multinationals that are owned by a combination of Nigerians and foreigners self-regulate in terms of H&S, irrespective of the fact that they are not covered by any local legislation and organisational norm accounts for such. These firms have corporate policies, which require them to self-regulate irrespective of the country they operate in.

Empirically, Christmann and Taylor (2001) show that the scope of operation of firms determines self-regulation. Section 4.6.3 also notes this as a possible explanation for the difference between multinational firms and indigenous firms. However, the finding of Cashore et al. (2005) in section 5.2.2, suggests a different reasoning to this discourse. This is where the international market does not determine preference to a particular self-regulatory programme. This brings to mind the point that although

contractors may self-regulate, scope of operation may (or may not) determine the quality. Gonzalez-Benito & Gonzalez-Benito (2006) cover, among others, the size of company as factors of self-regulation.

Social legitimacy — The literature discussed so far in Sections 5.2.1 including Table 5.1, and 5.2.2 clearly shows this. Typically, Giuliano and Linder (2013) as a determinant of self-regulation where an organisation will self-regulate to gain or increase legitimacy in the society or industry or even with the regulator (also c.f Peterson & Diss-Torrance 2012). Winter and May (2001) label this as social motivation to compliance with environmental laws, suggesting social pressure from external actors such as the media as potential sources. Other authors also note that participating in industry self-regulatory programmes can make organisations achieve social legitimacy (King & Lenox 2000). Indeed, when the perceptions of the public on the activities of a firm or industry is negative, King and Lenox (2000) demonstrate that industry self-regulation can achieve compliance by designing self-regulatory programmes that change the norms and values of participating firms. Views suggest that under this element of the framework, organisations will self-regulate because of their reputation in that they want to gain recognition in the society of the industry (Peterson & Diss-Torrance 2012; Winter & May 2001). According to Peterson and Diss-Torrance (2012), it is possible that these activities of the regulated to gain social recognition can become internalised in some cases, leading to normative commitment. According to Giuliano and Linder (2013), social legitimacy can even prompt strategic legitimacy such as rebranding of products or even changing the norms in institutions.

Social pressure — This is different from social legitimacy in that ‘While social legitimacy is a characteristic possessed by the firm, social pressures are the actions of external actors who may influence firm behaviour’ (Giuliano & Linder 2013: 516). This can come in the form of external pressure such as lawsuits, political pressure, pressure from pressure groups or even the accident record of the organisation (Table 5.3). External pressure from NGOs can also determine self-regulation, as international organisations may be strict on firms to adhere to international standards or certain minimum requirements (Christmann & Taylor 2001). Sutinen and Kuperan (1999) also write about the social influence as an explanation of compliance behaviour and a possible link between social influence and the reputation of the regulated.

Power relationship — Contextual factors in Chapter 4 such as political influence, corruption, and bribery are mainly contributory to this element of the framework; it is then detailed in Table 5.3. Umeokafor and Isaac (2015a) note that this relates to the ability of the regulated to influence events in society. They go on to note that the regulated are also able to resist any opposition in the society (Umeokafor & Isaac 2015a). This means that the regulated will consider their ability to influence events in the society or to resist opposition and then decide to self-regulate or not. It is also possible that the financial power of the regulated can also influence regulatory activities or give the regulated a level of influence of impunity to resist regulation..

Normative judgment and motivation — This is clearly shown in the literature reviewed so far in Sections 5.2.1 (including Table 5.1) and 5.2.2. Specifically, this is about the internalised values of the regulated (Winter & May 2001; Peterson & Diss-Torrance (2012). This manifests in two ways (Peterson and Diss-Torrance 2012; Winter & May 2001). Firstly, this is about self-regulation because it is the right thing to do — moral duty or obligation — moral principle (Nielsen & Mathiesen 2003; Peterson & Diss-Torrance 2012; Sutinen & Kuperan 1999; Winter & May 2001) (also see normative motivation in Section 5.2.1 or altruism in Giuliano & Linder 2013). Secondly, this is about legitimacy or appropriateness: how legitimate regulated perceives the legislation (Peterson & Diss-Torrance 2012; Winter & May 2001; cf. Sutinen & Kuperan 1999) (also see normative motivation in Section 5.2.1) and how appropriate the regulated views the legislation. Peterson and Diss-Torrance (2012) goes on to show that this included the appropriateness of the regulatory activities. The regulated's sense of duty to comply and the appropriateness of the regulation cannot be separated (Winter & May 2001).

Regulatory case — This is well emphasised in the literature review so far and a core subject in the current study. It relates to regulatory related activities which can result or contribute to the regulatory threat (Giuliano and Linder 2013; King and Lenox 2000; May 2004; Nielsen 2003; Priyadarshini & Gupta 2003). For instance, Tables 5.1, 5.2 and 5.3 show that nature of the legislation, legislative proposals, political discourse, type of enforcement and the level of external involvement in regulatory affairs to name few, determine H&S self-regulation. Christmann and Taylor (2001)

provide empirical evidence that although the regulatory requirements of developing countries may be poor, firms in them that export to developed countries may self-regulate due to fears that environmental legislation in developed countries may be a barrier to them. Some factors here are related to other elements, for example, if the regulatory activities are viewed as unfair, they will be viewed as illegitimate, normative motivation.

Economic case — This draws on earlier discussions, deterrence theory in Chapter 2, and Sections 5.2.1 and 5.2.2 (including business case in Giuliano & Linder 2013). Typically, Winter and May (2001) note this as calculated motivation, Nielsen's work on compliance also covers economic concepts (2003), deterrence theory in Fairman and Yapp (2005a). This case manifests in two ways, business case and calculated motivation, but the aim is for economic gain. Under this case, the regulated may self-regulate if the financial benefits of self-regulation outweigh the implications of not self-regulating. These implications can be penalties, damages to the image of the firms, reduction in production, loss of employees to accidents *inter alia*. Furthermore the case for the economic motive to self-regulation is that the regulated will self-regulate so as to save cost or maximise profit (Giuliano & Linder 2013). Levinson (1987) also makes the economic argument for self-regulation alongside the business case arguments by King and Lenox (2001). Tables 5.2 and 5.3 support this element of the framework.

Figure 5.1 also shows **ability to self-regulate**. The arguments in terms of the ability of firms to comply with legislation in Section 5.2.1 including Table 5.1, Cashore et al (2005) in 5.2.2 and Christmann and Taylor (2004) can be repeated here. This is about the capacity of the regulated to comply with the law. This can be due to financial capacity, lack of awareness, even inability to carry out the requirement (Winter & May 2001; Peterson & Diss-Torrance 2012). For instance, the capabilities of firms, which can be the level of innovation and the level of education can determine if they will self-regulate (Christmann & Taylor 2004). The understanding of firms on the benefits of H&S self-regulation can go a long way in determining self-regulation and the extent that the firms will self-regulate. This case draws on other elements to form an element. Winter and May (2001) makes a case for classing ability to comply as a stand-alone explanation of compliance behaviour in Section 8.5.9.

5.4 SUMMARY

This chapter is a review of literature on self-regulation and compliance with laws. The review shows that despite the plethora of literature on self-regulation, little or nothing can be found in that regard in the construction industry not even in developing countries such as Nigeria. The authors have overlooked the influence of the environments in which companies operate on self-regulation and the link between them. The literature discussion in this chapter demonstrates that determinants of compliance with legislation are consistent with some determinants of self-regulation. It reveals the following as the main determinants of construction H&S self-regulation: ability of the regulated to self-regulate; normative motivation; regulatory case; social pressure; economic cases; market and/or industrial case, organisational case and power relationship case. They have been developed based on theory and evidence (on compliance behaviours, self-regulation and contextual environment) and validated through expert opinions. This is in addition to the external validation process that the framework had gone through but further validation is needed (Umeokafor & Isaac 2015a). The framework shows the hypothetic relationships among the elements of the framework. Socio-legal scholars interested in studies for analysing compliance behaviours or the factors of self-regulation in other countries or industries may find this framework beneficial. Before the development of the current framework, there is no record of a contextualised framework for analysing the determinants of self-regulation and compliance behaviour. The imperativeness of contextualised studies is made in various places in this thesis.

CHAPTER 6: RESEARCH DESIGN

6.1 INTRODUCTION

In this chapter is a discussion of the research design of the study, the flexible research design, covering the research strategy, qualitative survey. This has enabled an in-depth understanding of the phenomena through interviews. Justifications for adopting the research strategy and the data collection and analysis processes are also presented. Moreover, the research ‘onion’ in Saunders et al. (2009) is adopted as the framework for presenting the research design of the study. The knowledge gained from this chapter inspired Umeokafor (2015a).

6.2 THE GENERAL BACKGROUND OF FLEXIBLE RESEARCH DESIGN

In this study, research design means the process of turning research questions to research projects (Robson 2002), or ‘...the general plan of how you will go about answering your research question(s)...’ (Saunders et al. 2009 pg 136). A research design can be a fixed design — tightly pre-specified, hence an alteration to any component of the design is almost impossible (Robson 2002). This is mostly used for quantitative data (Robson 2002; also see Bryman 1984). It can also be a ‘flexible design’ — mostly about textual data, qualitative data (Robson 2002). The detailed framework emerges during the research; hence, the various aspects (data collection techniques, research questions, and perhaps, the aims of the research) can be revisited (Boeije 2010; Robson 2002). This may be because in the inductive approach, the frame of analysis and data are unknown (Boeije 2010) and research questions may be so obstinate in answering hence may have to be modified (Robson 2002). On the other hand, a research design can be a multiple design — a combination of both fixed and flexible elements of research design (for example statistical survey, and qualitative survey), but one design phase of the research follows the other, as a design cannot be both fixed and flexible at the same time (Robson 2002).

The research design of the current study stems from the premise that research questions are influenced by research philosophy and approach (Saunders et al. 2009). The research questions will, in turn, determine: the research strategy, the data

collection and analysis techniques, and the time horizon of the study, thus building knowledge (Pollack 2007; Robson 2002; Saunders et al. 2009; also see arguments for flexible design in Boeije 2010). The research questions of this study stem from the purpose(s) and existing theory; the research questions then inform the sampling strategy and methods (Figure 6.1) (Boeije 2010). However, the data analysis is linked to the sampling strategy towards answering the research questions, in turn, achieving the overall purpose of the study (cf. Boeije 2010).

Drawing on the premise established in this Section, and considering the aims of this study (Section 1.1), it can be argued that a flexible research design is appropriate. It should be recalled that the aims of the current study are to advance the understanding and explain the current realities of H&S regulation in Nigeria’s construction industry and develop a framework of recommendations for effective H&S regulation in the industry. The research question of this study presents an exploratory purpose, and Saunders et al. (2009) argue that such studies are better if they are flexible and willing to adapt to change. This will help in thoroughly studying the event, drawing conclusions as other inductive methods (Neuman & Robson 2004 cited in Zanjani 2015). If this study had been a solely positivist paradigm — quantitative research, a fixed design would have been adequate which may have involved experimental or non-experimental strategies (Robson 2002).



Figure 6.1: Framework of research design. Source: Robson (2002).

In a flexible design, researchers do not get everything in Figure 6.1 decided and fixed before collecting data so there is room for adjusting any of the elements in Figure 6.1 (Robson 2002) (also see Boeije 2010). In support, Bryman (1984) depicts this as qualitative research, noting it to be fluid and flexible. For instance, in some qualitative research, research questions can change during the study (Creswell 2007), providing a

better understanding of the problem (cf. Yin, 2014). This means that the data collection methods may also change (Creswell 2007).

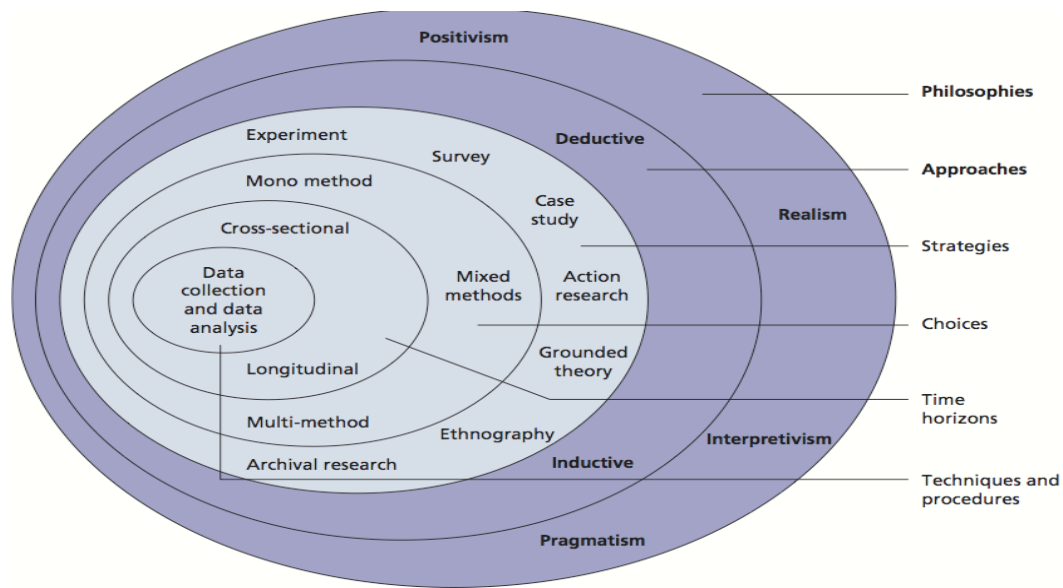


Figure 6.2: Research Onion: Source: Saunders et al. (2009)

However, validity and reliability remain issues of concern in qualitative strategies (Umeokafor 2015a). Consequently, there should be openness through steps such as well-developed research questions, adequate literature search, data collection instruments and analysis (Boeije 2010). Every decision in the research design should be thoroughly justifiable based on research questions and objectives and well formulated (Saunders et al. 2009) (see Boeije 2010). The justification should be consistent with the research philosophy (Saunders et al. 2009). Furthermore, steps such as triangulation, prolonged involvement can improve the trustworthiness of the research. Studies discuss the appropriateness of flexible design in qualitative research in detail (Boeije 2010; Robson 2002).

At this point, the research onion, Figure 6.2, is adopted as a framework for presenting the research design of the current study. The research ‘onion’ in Saunders et al. (2009) entails that all that has been done in this project and all the underlying assumptions are also presented. The concept, research onion, works by peeling the layers of the onion from the outermost, philosophies, till the last layer, data collection and analysis (Saunders et al. 2009).

6.3 PHILOSOPHICAL PREMISE

The first layer in Figure 6.2 is the research philosophies; its role in shaping research methods and strategies is noted or acknowledged in studies such as Kheni (2008), Manu (2012), and Saunders and Tosey (2013). Research philosophies relate to the nature of knowledge and developing knowledge (Saunders et al. 2009). According to Creswell (2007), there are five considerations that underpin philosophical assumptions in Figure 6.2 — positivism, interpretivism, pragmatism and realism. Firstly, ontology: the nature of reality or the study of reality or, simply put, the nature of things and how to understand the way the world works. Secondly, epistemology: the study of knowledge, — how the researcher discovers the knowledge. The third is, rhetoric, the research language while the fourth is methodology, the research process. The last is axiology, the function that value plays in the research. This chapter discusses two prominent research philosophies (positivism and interpretivism) (Kheni 2008; Manu 2012), and pragmatism, and two considerations of research philosophy — ontological and epistemological positions (Saunders et al. 2009).

Positivism is of the stance that the phenomenon in study cannot be influenced by the researcher and cannot influence the researcher (Kipo 2013; Manu 2008). Ontologically, the paradigm position sees the world as concrete and that reality is objective or one truth (Kheni 2008; Kipo 2013; Saunder et al. 2009; Umeokafor 2015a). As such, only the phenomenon that can be observed are believed to produce credible data — epistemological position and can only be seen as the truth and/or valid (Nani 2012; Saunders et al. 2009).

On the other hand, **interpretivism/constructivism** assumes the ontological position that there is more than one truth — multiple truths — socially constructed; it also depends on the ability of the investigator to interpret and construct data (Kipo 2013; Lietz et al. 2006; Manu 2012; Saunder et al. 2009; Umeokafor 2015a). This means that the reality is subjective and can be influenced by the investigator. In terms of epistemology, it is of the position that what makes up acceptable knowledge is subjective and a social phenomenon in that they are created, developed and elucidated by individuals based on their environment (Kheni 2008; Saunders et al. 2009). In this case, the social actors are critical (Saunders et al. 2009) if not indispensable in

understanding the object of study. If this is the case, that means that to understand the object of study or better put to produce acceptable knowledge, the interaction between the environment and individual is needed. Understandably, qualitative strategies excels at ‘what’, ‘how’ and ‘why’ questions (Eriksson & Kovalainen 2008). There are however points against qualitative research such as: generalisation, validity and reliability (Easterby-Smith et al 1991; Robson 2002; Saunders et al. 2009). These are discussed in detail later in Section 6.5.3.2.1.

Pragmatism is different from above; it assumes that the research question determines the epistemological, ontological and axiological positions of any research (Saunders et al 2009). Hence, it is not committed to any particular research paradigm; one research paradigm or a combination of both may be more appropriate, provided it is beneficial to the study (Mackenzie & Knipe 2006; Saunders et al. 2009). It mostly underpins the mixed-methods research philosophically, as Mackenzie and Knipe (2006), and Saunders et al. (2009) show. Authors such as Mackenzie and Knipe (2006) argue that although certain research methods mostly predominate particular research philosophies, this is not absolute, for example, see Table 6.1.

Table 6.1: Matched research philosophy and methods. Source: Mackenzie and Knipe (2006: 197)

Paradigm	Methods (primarily)	Data collection tools (examples)
• Positivist/ Postpositivist	Quantitative. "Although qualitative methods can be used within this paradigm, quantitative methods tend to be predominant . . ." (Mertens, 2005, p. 12)	Experiments Quasi-experiments Tests Scales
• Interpretivist/ Constructivist	Qualitative methods predominate although quantitative methods may also be utilised.	Interviews Observations Document reviews Visual data analysis
• Transformative	Qualitative methods with quantitative and mixed methods. <i>Contextual and historical factors described, especially as they relate to oppression</i> (Mertens, 2005, p. 9)	Diverse range of tools - particular need to avoid discrimination. Eg: sexism, racism, and homophobia.
• Pragmatic	Qualitative and/or quantitative methods may be employed. Methods are matched to the specific questions and purpose of the research.	May include tools from both positivist and interpretivist paradigms. Eg Interviews, observations and testing and experiments.

Drawing on the premise established in Section 6.2 and the foregoing literature discussion, it is evident that the interpretivist philosophy is appropriate in answering

the research questions of this study and in achieving the aims of the current study. More specifically, to understand and describe the current realities of H&S regulation in Nigeria from the perspective of the construction contractors requires getting closer and interacting with the respondents. This is analogous to what Lundy (2013) describes as '*hard to qualify category or phenomena*' (pg 58). As Lundy (2013) notes, if parameters such as workplace accidents *inter alia* are to be measured, the positivist philosophy will be adequate (also see Manu 2012). He goes on to note points that adduce that the research philosophy that has been adopted in the current study is adequate arguing that measurements will not provide the adequate understanding in research phenomena of this nature where understanding phenomena of this nature is the aim (Lundy 2013). More especially, borrowing from HSE (2005a), Lundy posits that in studies of this nature of qualitative phenomena in H&S covering culture and human behaviour, the qualitative paradigm may be adequate (Lundy 2013).

In affirmation, Kheni (2008) while justifying the rationale for adopting qualitative and quantitative techniques in his PhD study, demonstrates that understanding construction H&S where cultural and socio-economic environmental influences are inherent, the interpretivist viewpoint is adequate. It should be noted that Kheni (2008) demonstrates the influence of internal and external environments on H&S as this thesis does in chapter 4. The research approach discussion below adduces the appropriateness of the philosophical position of this study.

6.4 RESEARCH APPROACH

The interpretivist paradigm entails more of an inductive approach or inductive emphasis (Creswell 2007) as against a deductive approach, which Saunders et al. (2009) present in Table 6.2. Consequently, it is tempting to ascribe the inductive approach (which involves theory building) to all qualitative research and ascribe deductive approach (which involves theory testing) to all quantitative research. However, studies such as Saunders et al. (2009) and Umeokafor (2015a) consider this to be misleading with no value in practice. Emphatically, qualitative surveys as Jansen (2010) demonstrates can be open (inductive) surveys using interpretation of raw data such as interviews; or pre-structured (deductive) surveys using a structured

protocol for observation or for questioning. Inductive and deductive approaches were adopted in the current research.

Table 6.2: Major differences between deductive and inductive approaches to research
Source: Saunders et al (2009)

Deduction emphasises	Induction emphasises
<ul style="list-style-type: none"> • scientific principles • moving from theory to data • the need to explain causal relationships between variables • the collection of quantitative data • the application of controls to ensure validity of data • the operationalisation of concepts to ensure clarity of definition • a highly structured approach • researcher independence of what is being researched • the necessity to select samples of sufficient size in order to generalise conclusions 	<ul style="list-style-type: none"> • gaining an understanding of the meanings humans attach to events • a close understanding of the research context • the collection of qualitative data • a more flexible structure to permit changes of research emphasis as the research progresses • a realisation that the researcher is part of the research process • less concern with the need to generalise

6.5 RESEARCH STRATEGY

In Figure 6.2, the next layer to peel and discuss is the research strategy. This Section also discusses other strategies not covered in Figure 6.2. The strategies are grouped here under qualitative, quantitative, quantitative/qualitative/mixed strategies and methods. Importantly, Saunders and Tosey (2013) exemplify that a research design can have more than one research strategy. They present a research of ‘action research’ strategy but a survey strategy was adopted in data collection and analysis (Saunders & Tosey 2013). Saunders et al (2009) also support this.

6.5.1 Qualitative strategies and methods

As against validating the truth or even predicting outcomes, qualitative strategies thrives in presenting idiosyncrasies of conditions by providing sufficient and in-depth details and understanding of the phenomenon in study through in-depth and rich exploration of subjects (Myers 2000).

6.5.1.1 Phenomenology

This is a qualitative research strategy and seeks to understand the meaning of experiences to people, providing substantial insight of personal experience and what determines their actions and motivations (Creswell 2007; Lester 1999; Park 2012). As such, this involves a close relationship between the research object and the researcher.

It, however, presents some challenges such as data analysis challenges (Lester 1999), lack of generalisation of findings *inter alia*.

6.5.1.2 Grounded theory

This is widely viewed as a qualitative research strategy and is aimed at developing theory using inductive approach and data collection techniques such as participant observations and interviews (Creswell 2007; Kheni 2008; Robson 2002). Theories from such studies are grounded as they are developed from the study being carried out (Robson 2002). Nonetheless, views, for example, Saunders et al. (2009), Easterby-Smith et al. (1991) hold that a combination of induction and deduction can be adopted in this strategy in theory building. However, according to Easterby-Smith et al. (1991), there is the debate of which analytical approach should come first.

6.5.1.3 Ethnographic studies

This is another qualitative research strategy that seeks to describe and interpret the social and cultural setting of a social group (Creswell 2007; Robson 2002). Therefore, the social interaction, attitudes and understanding in communities, groups, and organisations are understood (Jansen 2010: 57; Reeves et al. 2008). Data is mainly collected through observations but interviews can be used to clarify the observations. This strategy, however, faces challenges such as the validity of research, as the researcher may be over-involved in the study, spending so much time in collecting data (Robson 2002). Further, the length of time needed for observation and interviews remains another challenge (Reeves et al. 2008).

6.5.1.4 Narrative research

This is a qualitative research strategy where the researcher gathers data by asking one or two individuals to tell stories about themselves and then goes on to report the meaning of the experience(s) of the individual(s) chronologically (Creswell 2007).

6.5.1.5 Action research

Robson while writing about action research, notes that it is more aligned to the qualitative research as against fixed research design which it is alien to (2002). The process and attributes of the strategy may explain this. While defining this strategy, Lundy (2013) presents O'Leary's (2005) definition that the strategy tackles '...real-

world problems in participatory and collaborative ways in order to produce action and knowledge in an integrated fashion through a cyclical process' (pg 60). As such, the researcher is actively involved in the action for change (Saunders et al. 2009). A significant aim of this research strategy is that it takes research to a more real world level by effecting change to the conventional research goals which are normally centred on explaining, understanding and describing phenomena (Robson 2002) (also see Lundy 2013). Saunders et al. (2009) stress that action research is different from other research strategies because it focuses on action and at the same time seeks to advance change in the organisation. As such, views hold that it is more efficient in answering 'how' research questions (Saunders et al. 2009). Saunders et al. (2009) and Robson (2002) discuss this approach in detail, covering the downsides and benefits.

6.5.2 Quantitative strategies and methods

On the other side of the research paradigm are the quantitative strategies. These are based on a positivist philosophy where in most cases the deductive approach is adopted. It deals with measuring and quantifying data, testing theories or hypotheses or establishing statistical relationships, but is unable to explain the relationship satisfactorily. Results of findings from quantitative studies are objective and generalisable (Lund 2012); Park (2012) tells us that this sees the researcher as investigating events based on an outsider's point of view. Scholars argue that this strategy offers fast data collection and analysis processes and validates independent results (Park 2012). However, in theory building, this strategy is not reliable in providing understanding of relationships among variables (Kheni 2008).

6.5.2.1 Experiment

This strategy produces or makes use of quantitative data. It can analyse and identify the relationship among phenomena in a controlled and structured environment (Neville 2007; Saunders et al. 2009). It measures small variables and tests hypotheses to name but few (Saunders et al. 2009). The strategy can be used in physical sciences where this is laboratory-based, while in social sciences, it is field-based (Manu 2012). Due to its attributes, which can also present inabilities, Saunders et al. (2009) argue that it may be inadequate for some management and business research questions.

6.5.3 Qualitative/quantitative/mixed strategies

6.5.3.1 Archival research

This approach provides a platform for answering research questions that focus on the past and changes over time, where the main data sources are administrative records and documents (Saunders et al. 2009). This can be a reliable way of studying reality, as the data used was not collected for research but for administrative purposes (Saunders et al. 2009). This strategy is used for exploratory, descriptive and explanatory studies, but they can only answer questions that the nature of administrative data enables it (Saunders et al. 2009). As a result, some types of qualitative and quantitatively oriented research questions can be answered using this.

6.5.3.2 Survey

Statistical survey — Jansen (2010) strongly demonstrates that surveys can be statistical (quantitative) or qualitative. Statistical surveys of a deductive approach and allows the researcher to collect quantitative data and analyse it, using descriptive and inferential statistics, for example, the percentage of people that do not eat fruits (Jansen 2010; Saunders et al. 2009). Saunders et al. (2009) go on to argue that this strategy provides a platform for easy comparison of data and can be used to produce models of relationship(s) among variables, suggesting reasons for the relationships. The data collection technique is mainly through questionnaires, structured interviews, structured observation (Saunders et al. 2009) or a combination of both. Manu (2012) discusses the longitudinal and cross-sectional studies that this strategy involves. Importantly, the sample in the strategy must be representative of the population.

Qualitative survey — Conversely, Jansen (2010) tells us that unlike statistical surveys, qualitative surveys seek to find the diversity that exists in a topic or cognitions or behaviours or characteristics in a given population through interviews. This is unlike ethnographic studies, which search ‘...for steady pattern of interactions in a certain community...’ (Jansen 2010: 57), and mainly excels in studies of social and cultural settings. Also, qualitative surveys demonstrate the meaningful dimensions or values in the study phenomenon (Jansen 2010). The strategy involves semi-structured interviews on a small selected sample after which the data is analysed, showing the diversity in themes, types of behaviour or attitude — categories

(Jansen 2010). Just like in qualitative studies, the emergent themes are validated with quotations from the interviews. As much as qualitative surveys can be descriptive design, they can also show patterns of categories or behaviours — the relationship among or between characteristics of the units (Jansen 2010). The strategy has been adopted by many studies, but the exploration of its methodology remains non-existent in literature (Jansen 2010). The paradigmatic position of qualitative survey is not bound to a particular paradigm (Bryman 1988 in Jansen 2010); the strategy can be useful in the quantitative paradigm or qualitative paradigm (Jansen 2010).

In the current study, a qualitative survey has been adopted. The appropriateness of adopted qualitative approach to research has been demonstrated in various places in the current study. A quantitative survey or ethnography has been considered, but the confines of this study do not support that, especially as the latter seeks to unearth patterns of interactions that exist in a community (see Jansen 2010). Analogously, ethnography requires plenty of time, and it is expensive. Further justifications for adopting a qualitative survey are noted in Section 6.8.2, as it covers the research methods aspect of the onion; hence, it appropriate there.

Studies not limited to Frohlich et al. (2013), Marsan and Pare (2013), Schenk et al. (2013), Zanjani (2015) have adopted a qualitative survey as a research strategy using semi-structured interviews as data collection techniques. Specifically, just like in some parts of the current study, Marsan and Pare (2013) have developed a conceptual framework from literature and have conducted semi-structured interviews on stakeholders that relate to the context of the study. Some of their questions such as: *‘In your opinion, what are the key factors that facilitate or hinderin general?’* or *‘what are the key facilitating conditions or barriers associated with ...?’* (Marsan & Pare 2013 p. 734) are likened to the questions in the interview guide of the current study. They have then used NVivo to analyse the data presenting the result with quotes from the interviews (Marsan & Pare 2013). This has helped them identify the main factors that relate to the context of their study (Marsan & Pare 2013). At PhD level, Zanjani (2015) has adopted qualitative survey in answering ‘what’ research questions such as *‘What problems influence the effectiveness of collaboration tools within LMSs?’* and *‘What factors influence the successful engagement of students and lecturers with LMS collaboration tools?’* and a ‘How’ research question *‘How are*

collaboration tools within an LMS being used?'. This has also involved interviews. It is evident that this is in line with the current study.

6.5.3.2.1 Quality of qualitative strategies and methods

In qualitative strategies, ensuring that the research is reliable and valid (Robson 2002) and to some extent generalisation is pertinent (Falk & Guenther 2007; Myers 2000).

Reliability — Known as dependability in qualitative research, this concerns consistency in the results that the data collection and analysis tools have produced (Easterby-Smith et al. 1991; Robson 2002; Saunders et al. 2009; Yin 2014) — repeatability. This is a challenge for qualitative research as many data generation tools are non-standardised; this in turn hinders or makes reliability testing impossible or challenging (Robson 2002). Reliability is threatened by observer bias and error, participant error and bias (Robson 2002; Saunders et al. 2009). However, in line with Robson (2002) and Yin (2014), full details of the methodology of the current study were presented. Other steps such as triangulation were adopted in the current research and presented in Section 6.8. This helped ensure that the data collected reflects what obtains in reality and to reduce participant bias.

Validity — Known as credibility in qualitative research, this is used in this study to mean how true or correct or accurate the research is (Robson 2002; Saunders et al. 2009). Validity of data is a challenge in H&S issues, especially regulatory issues, as they share the same features with criminology research. Like criminology research, it faces the challenge that participants may be sceptical to release information, as they fear the possible implications of revealing such information. As a result, there is a likelihood of respondents providing biased or false information. However, again, triangulation (see Section 6.8) were adopted to ensure credibility in the research.

Generalisation — This, especially in case studies, concerns applying the findings of a study to other research settings (Falk & Guenther 2007; Robson 2002; Saunders et al. 2009), transferability in qualitative research. The grounds for generalisation by Falk and Guenther (2007) are demonstrated in this study. These are not limited to: theory building — inductive approach — conclusions are drawn from the factors that contribute to the patterns of behaviours demonstrated in the current study; having robust methodology and clearly stating it will help in proving/disproving or testing a

theorem; being specific on the context/situations where generalisation is made; a combination of all the above can also provide grounds for generalisation (Falk & Guenther 2007). These are presented in Section 6.8.

6.6 RESEARCH CHOICE

The next in Figure 6.1 is research choice, conceptualised in this study as the way the qualitative and quantitative procedures and techniques are combined (Saunders et al. 2009). Saunders and Tosey (2013) present this as methodological choice.

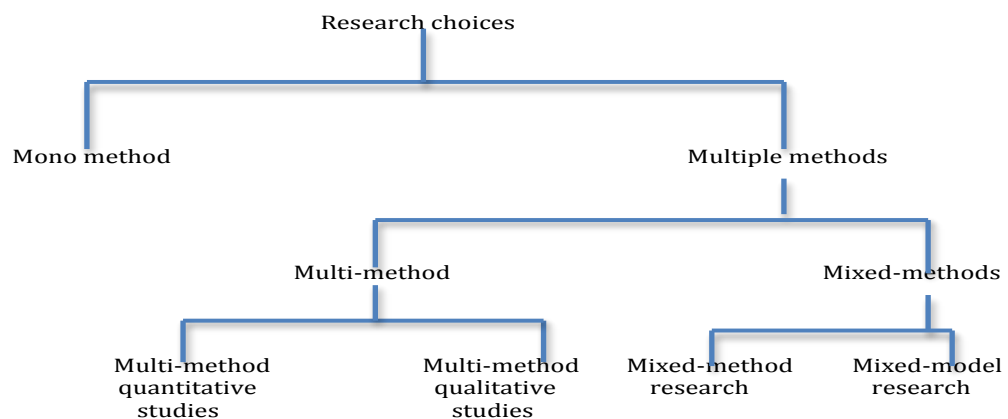


Figure 6.3: Research choice: source Saunders et al (2009)

Figure 6.3 shows that the choices of research can be of a mono method, where one data collection and one analysis process are adopted, but all will be of the same research philosophy (Saunders et al. 2009). In the current study, the mono method was adopted because it is the most suitable for answering the research questions. Further justifications are noted in Sections such as 6.5.3.2.

There are, however, cases where more than one data collection method and more than one data analysis procedure are adopted — multiple methods. Then under this category, are the mixed methods — research designs where there are combinations of qualitative and quantitative data collection, analysis and inference methods (Johnson et al. 2007; Saunders et al. 2009). This can be sequential — one approach coming before the other or the two types of approaches are adopted in parallel (Saunders et al. 2009). Johnson et al. (2007) offer a treatise on mixed methods, how the method is defined and conceptualised. They present: qualitative dominant mixed methods research — the researcher bases on qualitative research procedure and at the same

time acknowledges the efficacy or the importance of including quantitative approach or data in their research; pure mixed research — the researcher strongly believes that qualitative and quantitative approaches answer some research questions (if not all); quantitative dominant mixed methods research — the researcher bases on quantitative approach and acknowledges that including qualitative data or approach will improve the research.

Figure 6.3 shows that on the opposite side of mixed-methods research is the mixed-model research. This is quantitising qualitative data to become quantitative data or quantitative data can be qualitised to become qualitative data (Saunders et al. 2009). However, views contend that quantifying or quantitising qualitative data affects H&S research in that in terms of social and institutional context, the respondents' views may not be properly presented (Kaplan & Maxwell 1994 in Diugwu 2008).

In terms of multi-method in Figure 6.3, more than one data collection and analysis technique is used in a study but will be restricted to one research paradigm (Saunders et al. 2009). Indeed, under multi-method quantitative studies, the questionnaires and structured observation can be used but they must be analysed with quantitative data analysis techniques (Saunders et al. 2009). On the other hand are the multi-method qualitative studies, which involve interviews and documentation (to name two) but must be analysed with qualitative data analysis techniques (Saunders et al. 2009).

6.7 TIME HORIZON

This is the next in Figure 6.1. This occurs in two main dimensions thus: longitudinal studies and cross-sectional studies, where the former involves conducting research at a particular time while the latter is conducting research in what is likely to be daily event research or in chains of diary-like approach (Saunders et al. 2009). Lack of sufficient time often prompts research projects to be cross-sectional studies (Saunders et al. 2009) though research questions and funds can also determine the time horizon, as was the case in the current study. On the other hand, longitudinal studies, due to their attributes, can help in studying change and/or development (Saunders et al. 2009). While none of the above is restricted to a particular research strategy, studies demonstrate that cross-sectional studies are often used in survey strategies (see Saunders et al. 2009).

6.8 DATA COLLECTION AND ANALYSIS: METHODS APPLIED IN THE STUDY

6.8.1 Literature review

An extensive literature review was conducted, addressing objectives 1, 2 and 4 and creating a platform for addressing objectives 3, 5 and 6. Indeed, Chapters 1 and 3 make a case for research questions 1, 2 and 3. The literature review through Chapter 5 also demonstrates the gaps in knowledge, informing research question 3 and established factors that can determine self-regulation, achieving objective 4. The framework developed in Chapter 5 was subject to further empirical validation. The literature review served as the secondary data source.

6.8.2 Interview

Writing about interviews, Olsen (2004) discusses Silverman's (1993: 7) work on qualitative research, noting that '*People construe others' behaviour through their own subjective lens of perception, and the others' behaviour, too, is framed within their own subjective and discursive frame of reference*'. By implication, interviews serve two purposes, presenting or meeting two lines or angles of subjectivities (Silverman 1993 in Olsen 2004). Interviews excel in eliciting information on phenomena that cannot be observed, for example, the respondent's feelings, thinking and interpretation of the world around them — 'what and how' explanations (Merriam 1998 in Zohrabi 2013). Interviews can produce rich information from knowledgeable informants (Zohrabi 2013), an advantage over observation.

Consequently, in furtherance of the case made in Section 6.5.3.2 for adopting qualitative survey (which is interview-based), it can be argued that based on the research questions and objectives of the study in Sections 1.1 and 1.2, the features of the interview method will elicit adequate information. The complexity of the H&S regulatory environment of Nigeria and the project-oriented nature of construction further makes a case for adopting the interviews method. Document analysis was deemed inadequate for reasons such as: it is mainly used for triangulation (Bowen 2009), which the interviews already addressed; the risk of the data being skewed to a particular analytical group or category of contractors, or incomplete data; it would have partially contributed to addressing only research question 1. If self-regulation occurs in the natural setting, then observation may be more appropriate.

However, McCracken's (1988) view is that observation is inevitable or indispensable in every qualitative method in that, through one way or the other, it takes place. For example, during face-to-face interviews in the current study, the author observed the tone, body and facial expressions of participants, interpreting them alongside the interviews data. It showed passion, emotions, guilt, and signs of false information.

Interview protocol — The semi-structured interview guide was developed after informal discussions with key informants in the Nigerian construction industry, the review of literature on compliance behaviours, H&S, self-regulation and contextual influence. The interview guide was made up of open-ended questions. The first section examined the profile of the organisations and respondents while the second section examined the approaches and attitudes of the contractors in H&S self-regulation. The last section examined and evaluated the factors of H&S self-regulation in the industry (Appendices D & F). The participation request and introductory letters, which include ethical considerations, were sent to the respondents via email (or by hand where possible) (see Appendices B, C, & E for more details).

Prior to using the data collection instrument, certain steps were taken to ensure that the interview protocol was useable. The steps taken are consistent with the interview protocol refinement framework in Castillo-Montoya (2016). The framework consists of four phases: 'Ensuring interview questions align with research questions; constructing an inquiry-based conversation, receiving feedback on the interview protocol; piloting interview protocol'. The matrices for aligning the interview questions with the research questions noted in Castillo-Montoya (2016) were not adopted; the interview questions were written down and checked against the research questions. This helped in showing any gaps in the questions and, if a particular research question has little interview questions, addressing them. The questions were designed in such a way that it elicited information by ensuring conversation. This involved: avoiding questions that the respondents may view as judgmental, for instance, phrasing question with 'why'; among many; factoring in the contexts of Nigeria in the questions, for instance, following social rules, using day-to-day languages. In terms of receiving feedback on the interview protocol, the investigator read the interview protocol aloud and also had peers and supervisors read it aloud to see how the questions flow and how difficult answering the questions was. After this,

draft copies of the interview protocol containing the indicative questions of the interviews were sent to the persons in Figure 6.4 for pretesting. On receipt of their comments, the interview protocol was revised and piloted on five Nigerian construction contractors and four key informants. Table 6.3 shows the inclusion criteria in the pilot study.

Table 6.3: Pilot study: inclusion criteria. Source: The author’s field work

Type of participants	Location	Size of firm	Association with the industry	Duration of activity in Nigeria	Scope of operation
• Construction contractors	One/more of the six GZ in Nigeria	Large or S&M, or micro	Target group	At least Five years	Building and/or Civil Engineering
• Key informants	Nigeria		Direct or indirect association	At least Five years	

Key: GZ: Geopolitical zones; S&M: Small and medium

The interview guide was then revised again before the main data collection. The pilot study contributed to improving the interview guide in ways not limited to: rewording some questions, splitting or combining some questions, removing or adding a few questions. The pilot study also: provided an idea of the possible duration of the interviews; confirmed the ability of the interview questions to address the research questions or relevant objectives; highlighted ways to improve the research plan. Piloting interview guide is consistent with studies such as Diguwu (2008). This, in addition to other steps in this paragraph have not only helped in ensuring that the interview questions effectively achieve the relevant objectives, it has also helped to engage contributions of experts in the area.

- A construction consultant and academic in the University of Cape Town, South Africa, with significant experience in construction H&S in Nigeria and South Africa.
- Two H&S experts and academics in the University of Greenwich.
- Two H&S managers in Nigeria.
- An experienced Civil Engineer in Lokoja local Government Works department, Nigeria.
- One construction expert and academic in Bells University Abeokuta, Nigeria.
- One construction H&S, and construction innovation expert in the Loughborough University UK and European Construction Institute

Figure 6.4: Interview protocol ‘pretesters’

Sampling and data collection — A combination or mixed purposeful sampling was adopted in the study involving stratified purposeful sampling and snowball sampling where each sampling strategy addressed an/various objective(s) of the study. This is because ‘research and evaluations often serve multiple purposes’ including

triangulation and flexibility, as Patton (1990: 181) expands. In other words, the context of the research and the research question determine the sampling strategy (Palys 2008). As a result, Patton concludes that the underlying principle in sampling strategies is ensuring that 'information-rich cases' are selected (1990). By implication, 'there is no one best sampling strategy...' (Palys 2008: 678). Consequently, the purpose of combining or mixing the sampling strategies is to get information-rich cases (Patton 1990). Bowen reports how he has adopted purposeful sampling where he sought information-rich cases in one of his studies (2008). For the stratified purposeful sampling strategy, the aim was that the sample was made up of the major variations in the population of study (Patton 1990). Strata were developed based on construction business sizes, large, medium, small and micro, from the six geopolitical zones of Nigeria: South South, South East, South West, North Central, North West, and North East. Large organisations have over 199 employees, medium-scale firms have from 30 to 199; small scale have from 10 to 29 employees and micro scale firms have from one to below 10 employees (Kheni 2008). Each stratum was homogenous as Patton (1990) recommends. The foregoing strata were drawn from the results of a pilot study, which was conducted because there was no comprehensive list of contractors in Nigeria (see Idoro 2012). This is consistent with other studies where a pilot study was conducted and used as the sample frame, for example, Idoro (2012). Importantly, while the Federation of Construction Industry (FOCI) of Nigeria provided a list of registered contractors, it was outdated with no contact details of the contractors, very small and not a true reflection of the features of the population, an additional reason for the pilot study.

Furthermore, to facilitate comparison, the sampling also sought the construction contractors that constantly self-regulate (CSRCs), those that do not self-regulate (Non-SRCs) and those that do not constantly self-regulate (NCSRCs). Due to the difficulty in recruiting research participants, some experts in the Nigerian construction industry, including academics, advised that networking which is underpinned by snowball sampling be also adopted during the stratified purposeful sampling. This is where the author's contacts in the industry helped recommend people that would assist the research to gain access to participants; but they must fulfil the geographic location and company size criteria.

According to Suri (2011), snowball sampling is where key informants who can provide information-rich cases in a chain process of recommendations are recruited. In the current study, key informants with direct or indirect association or relationship with the construction contractors in health, safety and environment were interviewed. The criteria set for the key informants who are consultants (except construction H&S consultants) include that they must have worked for a contractor(s) in addition to the current role as a consultant. This would enable them to share their experiences on issues relating to contractors. Snowball sampling can lead to expert bias (Light & Pillemer 1984 in Suri 2011), but as it is not the only sampling strategy in addressing this research question, the level of bias is arguably minimised.

In order to achieve some level of trust with the participants, in line with Easterby-Smith et al. (1991), annual reports of the organisations (where possible) were reviewed; this made the author 'on the ball', in the words of Easterby-Smith et al. (1991). Further, initial phone calls were placed to the firms before the request for participation letters were sent; this has ensured credibility, cooperation, and creates a platform for further communication (Easterby-Smith et al. 1991). The participation letters and the introductory letters introduced the research, covering the estimated duration of the interview, how the data would be used and stored and their right of withdrawal from the research (See Appendices B, C, E and Section 6.9).

Face-to-face and telephone interviews were conducted in the current study lasting from 65–117 minutes. The face-to-face interviews in the study were conducted in neutral places (in line with Easterby-Smith et al. 1991; Mero-Jaffe (2011), with only the author and the interviewee. This made the interviewees relaxed and helped achieve trust, in turn, rich data. It also improved the quality of the recording, in turn, the quality of the transcription (Mero-Jaffe 2011). Where relevant, the seven different probing techniques in interviews (Easterby-Smith et al. 1991) were applied. This involved: repeating the questions when the interviewees unknowingly loses track, to realign them; focusing the questions on understanding a particular point; restating/rephrasing the last question when the interviewee stops responding; suggesting but not leading the interviewee; repeating the responses of the interviewee to confirm their response; waiting on the interviewee to break a long silence; asking the interviewees to expand on points with examples, but not when they were uncomfortable with it.

During the face-to-face interviews, the author maintained eye contact with respondents; this shows the respondent that the interviewer has their attention. It also helped the indispensable observation reported elsewhere in this section (McCracken 1988). During the interviews, the investigator established a good rapport with the interviewees; this made the interviewees relaxed. Before asking questions, the knowledge of H&S was assessed and, if deemed adequate, the interview continued.

6.8.3 Field notes

During the interviews, notes of the phenomena under study and the reflections of the author were noted in field notes. The notes provided rich data especially some issues that were observed such as body and facial expressions. Journaling of thoughts and decisions, then discussing it with the researcher's peers, is noted in Baxter and Jack (2008) to have contributed to improving the analytical process of their research.

6.8.4 Data analysis

As this study adopted a purposeful sampling method, data analysis and data collection were conducted simultaneously, leading to theory-based saturation (Bowen 2008; Mack et al. 2005). Although, content analysis advances analysis by measuring the frequency of different categories and themes, the options of choosing to either explore latent content or manifest content makes it a less preferable option in the current study (Vaismoradi et al. 2013). Consequently, thematic analysis that involves exploring both manifest and latent content and enables a thematic map of visual presentation of themes, codes and their relationship (Vaismoradi et al. 2013) was adopted in the current research. In the thematic analysis, the analytical process was a combination of the deductive and inductive approaches (Bradley et al. 2007). Evidence in the literature shows that thematic analysis is flexible but should be rigorous. Indeed, as depicted in Figure 6.5, while the thematic analysis can be inductive, for example, Boyatzis (1998), Braun and Clarke (2006); it can also be deductive, for example, Braun and Clarke (2006), Rusk et al. (2015), and can even involve a combination of inductive and deductive analysis — hybrid thematic analysis, for example, Fereday and Muir-Cochrane (2006). In inductive analysis, the coding process does not involve trying to fit the data into a pre-existing code frame or any analytical preconception of the researcher — data-driven. Here, the qualitative data supports or invalidates theories (Myers 2000). Conversely, in deductive thematic analysis, the coding process

involves trying to fit the data into a pre-existing code frame or any analytical preconception of the researcher — theory-driven (Braun & Clarke 2006).

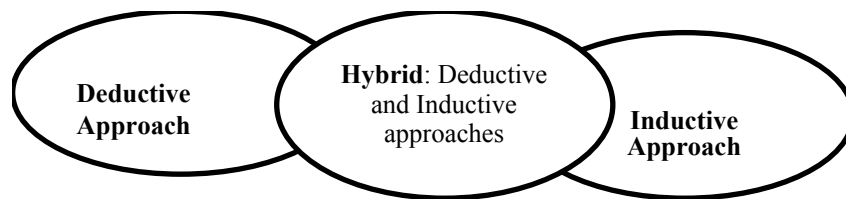


Figure 6.5: Approaches to thematic analysis. Source: Author’s elaboration

As shown in Section 6.2, the research questions determine, among many, the data collection and analysis process. In the current study, the three approaches to thematic analysis noted in the preceding paragraph were adopted (See Figure 6.6). For research question 1, the hybrid approach was adopted; for the second research question, the analysis was inductively thematic; for the third research question, deductive thematic analysis was conducted. Typically, the part of objective 5, which seeks to ‘verify and investigate’, makes the case for the hybrid analysis for research question 1. Then for the second aim, developing a framework to improve H&S regulation based on empirical evidence, an inductive approach was adopted. Details of the analytical approaches adopted in the study are presented later in this chapter. Importantly, that inductive analysis is data-driven does not mean that the author would not have ideas that can form the initial codes. Strauss and Corbin (1990) note that categories’ names, especially at the initial stage of the analysis, can be informed from the words of the respondents or from the researcher’s review of literature.



Keys: Research question (RQ), Development of the recommendation framework (DRF)
 Figure 6.6: Analytical approaches adopted in the study. Source: Author’s fieldwork.

The thematic analysis adopted in the current study involved six phases as reported by Braun and Clarke (2006), and elaborated in Figure 6.7. Braun and Clarke (2006) stress the flexibility of the six-phase thematic analysis process in that it is just a guide and not linear hence the analyst can go back and forth. The process is determined by the research questions and data (Patton 1990 in Braun & Clarke 2006).

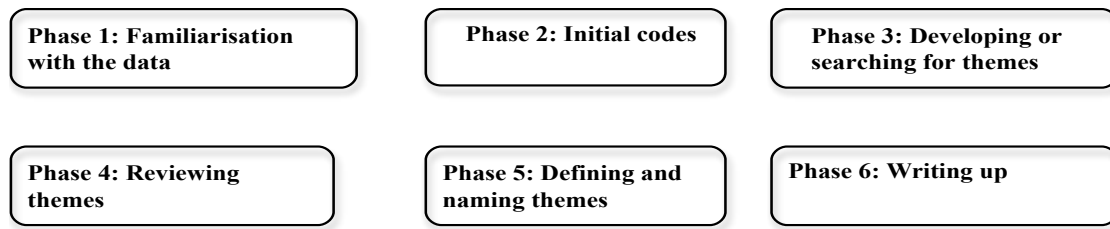


Figure 6.7: Six-phase thematic analysis process.
 Author's elaboration, content from Braun and Clarke (2006)

Phase 1, familiarisation with data — The author transcribed the data verbatim alongside the notes of body, tone and facial expressions in the interviews — Naturalised transcription (Mero-Jaffe 2011). This helped in providing a complete and valid picture akin to the interviews (Mero-Jaffe 2011). However, with reference to the interview field notes (containing notes on body movements, moans, coughs, smiles, *inter alia*, facial expression) the author carefully ensured that wrongs voices or movement (if any) in the background were not wrongly transcribed, so as to avoid wrong conclusions of the research or output (cf. Mero-Jaffe 2011). Further notes, annotations and memos were taken during the transcription; this formed part of the analysis. The author read data many times to become immersed in the data.

Phase 2, Initial codes — after Phase 1, the author was now immersed in the data and had some ideas about the data and issues of interest. At this stage, the author systematically identified the interesting features of the entire data and named them. One of the analytical coding procedures ‘asking questions’ (e.g. what is happening here) was adopted in the research (Basit 2003), but the constant comparison of four analytical groups, CSRC, NCSRC, Non-SRC and Key informants was adopted for triangulation purposes. Equally, line-by-line coding was also conducted during the above stages of coding. This involved examining the sentences in the transcripts to extract both the latent and manifest contents. Writing about latent meaning points to factoring in the abstract essence of the data (Bowen 2008). There were a lot of frequently used words and this suggested the conceptual categories (Bowen 2008). It is vital to note that the field notes were also factored in at various stages of the analysis. The entire data was managed by coding all that fell into each research question and the second aim of the study under 'broad parent codes', 'attitudes' 'approaches' 'determinants' and 'improving H&S regulation' as applicable. The rest of

the data were coded under the 'broad parent codes', 'outliers', to be attended later. This helped reduce the data into a manageable size, just like open codes in Bowen (2008).

Then for research question 1, which involved hybrid thematic analysis, the deductive analysis was first conducted, with the author fitting the data into the analytical preconceptions of the author, which was informed by literature. These are not limited to setting or adopting standards, monitoring standards, inspections, which manifested without any external involvement and under compulsion. After the coding of the aforesaid, the rest of the data that were assembled under this research question were coded but driven by data. These are setting or adopting standards, monitoring standards, among many, that manifested under the watch of the community, social or civil actors and clients. The enforcement techniques here (e.g. kidnapping the employees of contractors) were akin to the deductive codes, as they are coercive but not aligned to them and even offered fresh and unique ideas to the coding process.

For research question 2, the author had few preconceptions, that H&S is the responsibility of large or oil and gas contractors so the coding focused towards that. The rest of the coding was then driven by data. The same was repeated for the aim, 'improving H&S regulation' where the coding was driven by data. The author has a little preconception such as designing local H&S laws.

Lastly, for research question 3, the data were coded to fit the theory and evidence in elements of the framework for analysing the determinants of construction H&S self-regulation, Umeokafor and Isaac (2015a), presented in Chapter 5. For details of these theories and evidence, see Table 5.3. There were, however, some codes that do not fall into the aforesaid preconceptions; hence, the coding was driven by data. Importantly, there were overlaps on the codes in the four 'broad codes' as some codes across the 'broad code' were combined to form codes. The codes were organised or structured in a potential hierarchy. This involves creating potential parent nodes, potential child nodes. The child nodes come under parent nodes. The nodes were also briefly described. From time-to-time, the author took the time to reexamine the nodes ensuring they fit into the potential hierarchy. This helped in checking for saturation point as will be further presented below. The broad parent node, 'outliers', were reexamined at this stage to see if there were codes that could be reassigned to any of

the four broad parents nodes above. Memos and annotations of ideas played significant roles during this phase of the analysis. Importantly, NVivo for Mac has features that enabled the author to conduct matrix analysis. This is where respondents are assigned with 'attributes' based on their profile or unit of analysis. There were attributes for the size of construction businesses; how often they self-regulate; contribution to the analysis, for example, key informants, construction businesses; ownership structure (e.g. multinationals); others such as formality of organisation. Based on these attributes, matrices analysis of these attributes were run against various items of analysis, showing a side by side view of what each group with attributes said or demonstrated in terms of the various items of analysis.

Phase 3, searching for themes — the list of codes produced in Phase 2 was arranged or sorted into potential subthemes and themes. This started in Phase 2 by structuring the nodes into a potential hierarchy. This phase entailed looking for how different codes would be combined to form the potential subthemes and themes (Braun & Clarke 2006). The text search query, Matrix coding, and coding features of the NVivo for Mac played a significant role. The visual presentation of NVivo, word tree, was helpful, showing the branches, different contexts that the word or phrase appears.

The nodes were already in a hierarchy, with potential parent and child nodes in Phase 2. These nodes are the code, sub-theme or subcategories and themes. These were reexamined and refined and the relationships between the nodes and coding disputes were finally resolved and recoded, reducing the subcategories and codes, hence now clearer. The predefined code frame in the deductive analysis aspect of the data was then compared with the child nodes and parent node while the searching of themes in the inductive analysis aspect was data driven. It was now becoming clear how the data fit into the predefined code frame. The relationships between the potential themes were also established. There were some nodes that did not adequately fall into any parent nodes; these were grouped under a theme, 'misfit'.

Phase 4, reviewing themes — here the author reviewed and refined the potential themes at two levels: level 1 — reading through all the extracts in each theme to ensure that the extracts were consistent and coherent with the potential themes. Most of the potential themes did fit in but some were merged into/to the existing ones to

enrich the codes. New themes, subthemes were created and distilled, examining new subthemes and themes that emerged from the data. Importantly, this phase already started in Phase 3. The predefined code frames that were used at various stages of the analysis also helped this. After the first level, at the second level, the author validated the potential themes against the entire data to ascertain if the potential themes were reflective of the data. The author ensured that the potential themes told a compelling story and the relationships between potential themes were also defined and reviewed.

Phase 5, defining and naming the themes — in this phase, the author explored the ‘fitness for purpose’ of each theme; the message or story the theme was telling and how the theme contributed to understanding and explaining the regulation of H&S in Nigeria and in developing a framework of recommendations. These resulted in renaming and redefining the themes. The author also ensured that the themes were not overburdened and that the names were focused (Castillo-Montoya 2016), clearly passing the intended message of the themes and ensuring a good read. This ensured that each of the aforesaid themes 'capture something important' in terms of the overall research question', ensuring the 'keyness' of the theme (Braun & Clarke 2006).

Phase 6, producing a report — after the above, the author consolidated the entire data set and analysis towards addressing the aims of the study in telling a compelling story. This included using quotations from the interviews to illustrate how ideas, among many, support claims in the narrative report.

Saturation — While not achieving saturation does not mean that the findings are unreliable rather that there is room for further exploration, there is a need to report if saturation was attained or not and if attained, should be clearly detailed as to how it was achieved (O’Reilly & Parker 2012). Bowen (2008) criticises academic publications that do not explain how saturation was attained arguing the imperativeness of demonstrating how saturation occurred. However, some authors contest the application of the concept of saturation in all qualitative approaches. O’Reilly and Parker (2012) offer a treatise on saturation concluding that, although the application of saturation in research strategies needs further exploration, the concept of saturation as the criterion for establishing the quality of research in all qualitative approaches is inappropriate. Indeed, 'the potential for achieving saturation (in

deductive approach to research) ... is unrealistic...' (O'Reilly & Parker 2012: 194). This is because the 'deductive approach is much broader and the researcher is unaware of the types of categories that may emerge from the data collection' (O'Reilly & Parker 2012: 194). Drawing on Wray et al. (2007), O'Reilly and Parker (2012) go on to argue that given the uniqueness of life, data can never be truly saturated as further exploration of the data always shows new things. If this is the case, then assessing the current study on the concept of saturation as the criterion for establishing the quality in the research may be complex as the analytical process is a hybrid — inductive and deductive approach. If the study was solely based on the deductive approach, it would have been unethical to target saturation as it would mean recruiting more than the necessary participants (Francis et al. 2010), but the hybrid analytical process makes targeting saturation acceptable.

The preliminary analysis was conducted concurrently with data collection till theoretical saturation was attained as earlier stated. One of the ways that saturation was confirmed during the data collection is in line with the views of Bowen (2008) and Bradley et al. (2007) where in order to attain theoretical saturation there will be no new concepts emerging. The sample of 46 (of the over 53 interviews conducted) for the study was defined by data saturation during the concurrent data collection and analysis processes. However, if conceptual gaps and/or new relationship are observed, data collection and analysis continued so as to refine the commonalities and diversities in emerging categories or concepts or codes (Bowen 2008; Bradley et al. 2007). While saturation can be established by adopting intercoder reliability (Bradley et al. 2007; Vaismoradi et al. 2013), establishing the reliability of multiple coders with some selected data (Bradley et al. 2007), triangulation of data (Fusch & Ness 2015), in the current study, the saturation grid (Brod et al. 2009) was adopted because it was conducted by one researcher, the author of this thesis.

Following the premise of Brod et al. (2009), the author designed a preliminary saturation grid during interviews and refined it during the coding process. The preliminary saturation grid was continuously developed as the interviews progressed. The major themes were the initial codes, which were informed by the predefined coding frames, some initial analytic thoughts and interests; they were then listed in rows in the first column of the table of the saturation grid. The subsequent columns

were made up of interview groups, CSRC, NCSRC, Non-SRC and Key informants. Codes/subthemes/evidence were then noted under the appropriate groups horizontally. Each group had a column for each respondent in the group. For instance, for the CSRCs, each time an interview in that group was conducted, a new column was created to house any new evidence that may not have been noted in an existing previous subtheme or code in that group which would, in turn, inform a new theme. If a new theme was found, more interviews were conducted. The process was continued until there were no more new themes that contributed to theory construction for that group, thus the grid column for all the groups was empty. Just as Brod et al. (2009) recommend, the saturation grid was refined producing a more accurate one during the coding process, which was also conducted concurrently with the interviews. New subthemes, themes and relationships were discovered so further interviews were conducted. This was conducted alongside the analytical process until there were no new meaningful themes that would contribute to theory construction at this second coding level. There were some cases when a particular group appeared not to have experienced subthemes that were well emphasised in other groups. In such cases, the author reexamined the transcripts for the group to see if there was an existing theoretical explanation for the group not experiencing it.

6.8.4.1: Ensuring trustworthiness in the research

In addition to the reported four steps of the interview protocol refinement (Section 6.8.2), further steps below also contributed to ensuring transparency, credibility, reliability, confirmability and transferability in the research — trustworthiness.

Triangulation — This is the combination of multiple data points, theories, methods, and investigators in studying one phenomenon (Denzin 1970) to develop a comprehensive understanding of the phenomenon and improve credibility in qualitative research. Bryman (2004) offers a treatise on triangulation, covering data theoretical, methodological and investigator triangulation (also see Robson 2002). In triangulation, Adami (2005) demonstrates that the imperativeness of addressing what, why and how the triangulation(s) was applied. *What* — Triangulation of persons, analytical triangulation and method triangulation — multiple triangulation — was conducted in the current study (Adami 2005, Kimchi et al. 1991). Studies such as Humble (2009) used multiple methods of analytical approaches: constant comparative

technique, rank order comparison and visual analysis coding. In the current study, a combined analytical approach formed the method triangulation (Humble 2009). Humble (2009) in agreement with authors such as Meadow and Morse (2001) concludes that a combination of analytical approaches (for instance, computer-assisted, manual analysis, constant comparison) or multiple data analysis technique is a method of triangulation — method triangulation. The analysis in the current study was computer-aided where NVivo for Mac was used, in addition to constant comparison methods. Typically, the units of analysis were constantly self-regulating contractors (CSRC), and non-constantly self-regulating contractors (NCSRC) and non-self-regulating contractors (Non-SRC). The CSRCs and NCSRCs are made up of the large, medium and small contractors, but the NCSRC also includes micro-scale contractor just like Non-SRC, which also consists the medium, and small-scale contractors but no large contractors. The person triangulation involved the foregoing four of categories contractors and key informants. If the study sought the perceptions or experiences of a particular category, for example, large construction firms, the sampling would have centred on that category (Adami 2005).

Why — person triangulation was conducted to have a sample that will reflect the various categories of construction contractors and the six geopolitical zones in Nigeria so as to address the aims of the study. In line with Kimchi et al. (1991), findings from one group were used to validate data from the other group(s). It helped improve the trustworthiness of the research including credibility, and the transferability of the findings. The analytical and the method triangulations were conducted to improve the analysis and trustworthiness of the research including construct validity (Yin (2014). As Flick (2007) argues and studies not limited to Diugwu (2008), Golafshani (2003) and Kheni (2008) demonstrate, triangulation helps in improving the confidence in the findings of this study (Bryman 2004; Denzin 1970; Olsen 2004).

'How' were the triangulations conducted? For the person triangulation, it involved an initial review of the literature in Chapter 4 and informal discussion with stakeholders in the industry to identify the various categories of construction contractors and geopolitical zones in Nigeria. This helped provide a representation of the population to addressing the epistemological aspect of the aim of the study and not for statistical generalisation reasons. Adami (2005) describes this as presenting a full breadth of the

population for non-statistical purposes. The analytical triangulations occurred in the following ways: complementary, convergent, dissonant (Erzberger & Prein 1997; Sand & Roer-strier 2006); ‘unique information’, and illuminating’ (Sands & Roer-strier 2006). In the current study, convergence of evidence (real triangulation) involved using more than one source of data and analysing them together, that the findings are supported by more than one source of evidence (Yin 2014). According to Yin (2014), real triangulation helps in construct validity. Lauri (2011) argues that analytical triangulation in a converging way makes a sound research.

Peer debriefing — During the entire research process, the author exchanged ideas with his supervisors and peers who are experts; the aforesaid supported, challenged the research process, the author’s ideas (Creswell & Miller 2000). This established credibility through external sources (Creswell & Miller 2000). The relationship with some peers resulted in research collaborations (see pages xv–xvi).

Participant validation — This is denoted by various terms, for example, member checks in Lincoln and Guba (1985), member checking in Creswell and Miller (2000), respondent validation (Barbour 2001; Creswell 2000). It is about feedback from participants on data (the transcripts of respondents’ interviews) (Creswell & Miller 2000; Hagens et al. 2009; Mero-Jaffe 2011; Thomas 2017) and interpretation (a draft of the report, and the emerging findings) through comments, review and/or correction (Creswell & Miller 2000; Thomas 2017; Smith & McGannon 2017).

Thomas (2017) and Smith and McGannon 2017 warn against using participant validation as a checklist for showing trustworthiness in qualitative research. In relation to interview transcript validation by interviewees, there is a discord on the importance of its ability in ensuring credibility and validity of research findings (Hagens et al. 2009; Mero-Jaffe 2011; Thomas 2017); authors strongly argue for serious consideration before adoption (Hagens et al. 2009; Mero-Jaffe 2011). This is based on the evaluation of authors (e.g. Thomas 2017; Mero-Jaffe 2011) on the interview transcript validation by interviewees. Indeed, the advantages of interview transcript validation abound, for example, upholding research ethics (Hagens et al. 2009), ensuring that the views of the respondents are captured, free of any errors, inconsistencies (Hagens et al. 2009; Mero-Jaffe 2011; Thomas 2017), and giving the

participants a sense of control of the transcripts (Mero-Jaffe 2011). Others are not limited to ensuring equal or near control of the qualitative data between the interviewer and the interviewees — balance of power — as authors argue in qualitative research (Creswell 2007; Kragelund 2013; Kvale, 1996; Umeokafor 2015a). However, there are some disadvantages which some authors such as, Hagens et al. (2009) and Mero-Jaffe (2011) view or conclude outweigh the advantages of interview transcript validation. These are not limited to: the assumed burden that interview transcript validation places on interviewees (Barbour 1998; Hall 2004; cf. Mero-Jaffe 2011), temptation of using text which the interviewee has deleted which the researcher may view as crucial in making some points, the complexity that the refined data set will introduce in that the medium will be different: one written and one spoken (Mero-Jaffe 2011), the likelihood that the respondents will withdraw or alter information which they may view as negative (Thomas 2017) whereas it would significantly contribute to the research. Furthermore, the changes on the interview transcript by interviewees are reported as having little or no effect on the research findings or analyses (Hagens et al. 2009; Mero-Jaffe 2011; cf. Thomas 2017). This is consistent with the experience of the author of the current study. Drawing on the above, it is illogical to validate the interview transcripts especially as other steps such as triangulation contributed to ensuring validity and credibility in the research.

In terms of commenting, reviewing, and correction of a draft of the report and the emerging findings by the respondents, Thomas (2017) and Smith and McGannon (2017) offer a treatise on the subject. Thomas (2017) shows that using participant validation may only be justified if the main purpose of the research is ensuring accurate representation of the views or experiences of the participants, evaluation research such as programme evaluation, engagement between researcher and participants, personal or social change resulting in the participation in the research. Participant validation can also be used for ethical checks and to gather additional information (Thomas 2017) and in action research (Barbour 2001). Thomas (2017) goes on to demonstrate that there is no evidence that participant validation improves the quality of research with the main focus on theory development/generalisation. By implication, grounded theory strategies are usually focused on theory development, which can also occur in the thematic analysis, phenomenology, narrative approaches, discourse analysis, inductive analysis, hence participant validation (Thomas 2017: 29)

is not logical. This is because ' the validity of the theory developed does not depend on the accuracy of the portrayals of individual participants' perspectives' (Thomas 2017: 29). Participants lack the expertise to criticise the theory; this is the responsibility of the researcher (Thomas 2017; Smith & McGannon 2017). Further, '...people's political leanings and personal interests may, consciously or unconsciously influence member checking' (Smith & McGannon 2017: 7). It faces power relationship issues and is influenced by time hence reduces its effectiveness (Smith & McGannon 2017). There can be the disparity in the views of the researcher and the respondents as the former can be reflective overview accounts and the latter reflective of individual account (May & Pope 2000 in Barbour 2001; Smith & McGannon 2017). Earlier studies such as Morse et al. (2002) and Barbour (2001) argue against participant validation in theory development. Drawing on the premise established so far and as the current study is focussed on theory development and thematic analysis adopted, validation of emerging findings by the respondents is not logical, especially as steps such as triangulations have already validated the findings.

However, the content framework of recommendations was sent to twelve participants and three academics that are experienced in the Nigerian construction industry. Options for the feedback was via email, telephone and face-to-face. In total, eleven responses were received hence the framework was revised accordingly. This stage aimed at obtaining participant reflection on the workability/practicality of the framework of recommendations and not for theory development.

Addressing investigator effect — As the investigator is not independent of the object of study (Kipo 2013; Nani 2012) hence the object of study is susceptible to the influence of the investigator (Umeokafor 2015a), the steps below were taken to control or minimise the influence. Firstly, the author of the current thesis, consciously acknowledged his beliefs, perceptions and experiences which may influence the data collection and analysis — reflectivity — (Creswell & Miller 2000; Haahr et. al. 2014; Lietz et al. 2006; Walker et al. 2013), discussed it with peers and agreed on measures to take. For example, the author was mindfully objective towards the reflectivity journal content (consciously isolating any preconceptions) as much as possible during the data collection and analysis (excluding the deductive analysis conducted). This includes the experience of the author that construction H&S in Nigeria is poor, hence

few positives will come from it. According to Lietz et al. (2006) and Umeokafor (2015a), reflectivity helps improve the trustworthiness in research.

Secondly, as the author is based in the UK, which has a good H&S record, the respondents may be biased and tempt to protect the image of Nigeria, hence providing incorrect or false information. Consequently, the author explained to the respondents that he is Nigerian and has worked in the Nigerian construction industry and was aware of the happenings in the industry; hence they are free to share anything with him. While this may not guarantee the reliability of the information, the author observed that this might have helped improve the quality of the data.

Thirdly, during the data collection, the author avoided expressing his feelings to the participants, for example, expressing surprise or disappointment, as this might have made the respondents alter their responses. Fourthly, to address errors in the interview transcripts, which constitute investigator effects, the author listened to the interview recordings and consulted the field notes.

Other trustworthiness assurance steps — In furtherance to ensuring credibility, authors such as Bowen (2008) write about: negative case analysis; thick rich description — presenting how and why events occurred, including the data collection and analytical protocol. This is evident from the detailed presentation of the methodology of the current study in this chapter. The negative case analysis involved reexamining the themes and evidence to see if there was a contradiction between the two (Bowen 2008). Furthermore, recording the interviews greatly provided reliability, as the investigator could listen to the interviews many times to transcribe the data verbatim and even refer to the data if need be (Bakean et al. 2009, in Pugliese et al. 2015). The author was the interviewer and transcriber; hence, the compromising influences to the quality of the interview transcripts were reduced (Mero-Jaffe 2011). This is because the transcript may be biased by the difference in the language, class, culture of the transcriber and interviewee (MacLean et al. 2004 in Mero-Jaffe 2011).

Transferability

Given the arguments against generalisation in qualitative research in Myers (2000), transferability (recall, it is the level at which the findings of this study can be relevant

and applicable to other situations or context) is possible. As the study is about understanding or explaining what happens in a business setting, it can be externally generalised (Robson 2002). Above all, the sampling technique of the current study, combined purposeful sampling method noted in Section 6.8 demonstrates efforts to accomplish generalisation (see: Falk & Guenther 2007; Myers 2000). Figure 6.8 shows a summary of the overall research process of the study.

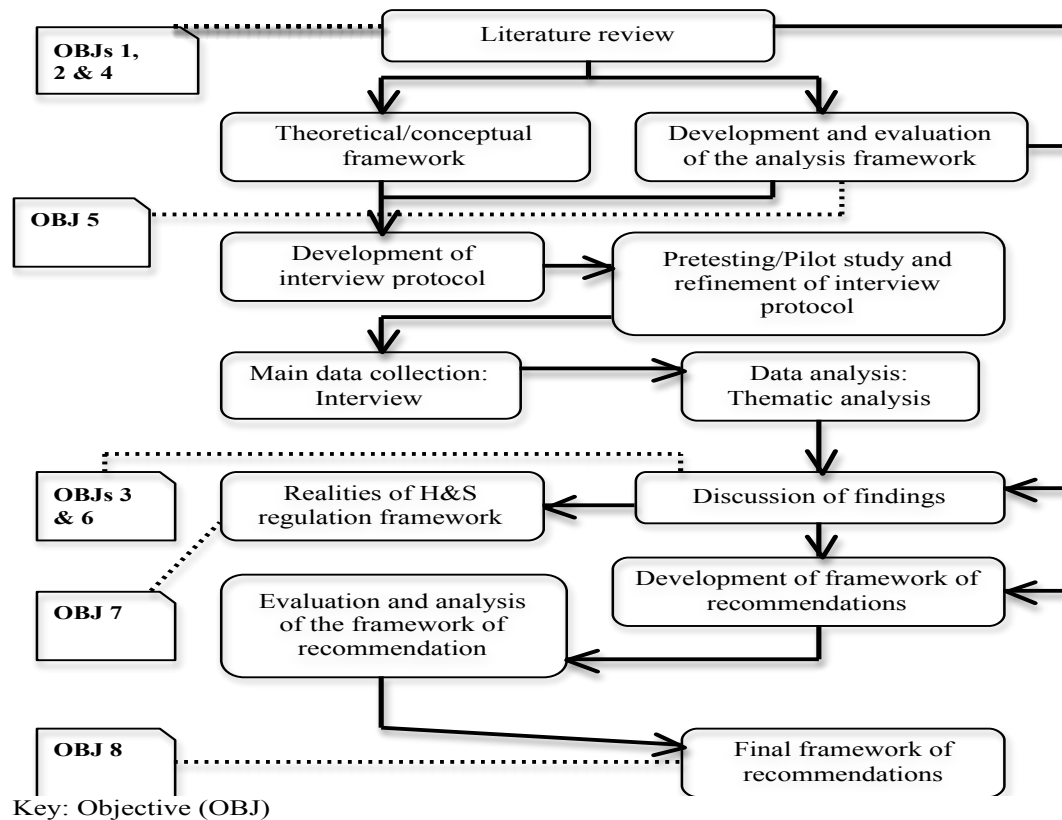


Figure 6.8: Overall research process
Source: Author's elaboration

6.9 ETHICAL ISSUES OF THE RESEARCH

Approval for the interview protocol and the ethical considerations during the data collection was obtained from University of Greenwich Research Ethics Committee. Where applicable, the managements of all the organisations granted permission to the author to conduct the research. The author made it optional for the respondents who wanted to take part in the result validation stage or those who wanted the findings of the study to be sent to them to signify interest. The author provided his contact details to the respondents. The participants were also informed of anonymity that will be provided while writing and reporting the data. This helped to reduce any potential

consequences of participation in the research. How the collected data would be used and when it would be deleted was explained to the participants.

The aim, nature of the research and anticipated contribution was explained to the participants, alongside highlighting that they could withdraw participation at any time without giving any reason up until two months after the interviews. Also, during the data collection, the author looked to observe any sign of discomfort from the participants, in the event of which he would discontinue the activity. The author sought permission to record the interviews, and the reasons for this were explained to the participants. Full details of the invitation to take part in the study and introductory letter, containing some of the above, can be found in the Appendices B, C, and E.

Security, safety, health and welfare issues of both the author and participants were considered. The author being a Nigerian and having worked there understood the cultures, politics and institutional environment of Nigeria so adequate steps have been taken to ensure that his work conforms with the requirements of the environment.

6.10 SUMMARY

This chapter presents the research design of the study, a flexible design, where a qualitative survey strategy was adopted. Using the ‘research onion’, the chapter discusses the research philosophies, approaches, strategies and data collection and analysis techniques that were adopted in the study. This includes the six-phase thematic analytical process consisting of deductive and inductive approaches. This chapter concludes by shedding light on ethical considerations of the research. The results of the qualitative survey are presented in the three chapters that follow.

CHAPTER 7: THE FIRST FACETS OF THE RESULTS — THE APPROACHES AND ATTITUDES TOWARDS CONSTRUCTION HEALTH AND SAFETY SELF-REGULATION

7.1 INTRODUCTION

This chapter presents the results of the first facet of the qualitative survey, involving in-depth interviews with stakeholders in construction contracting firms in Nigeria. The first section presents the empirical data on the approaches to construction health and safety (H&S) self-regulation, how it occurs and the attitudes of construction contractors towards it. These findings are already published in Umeokafor and Isaac (2016), but the research methods in Umeokafor and Isaac (2016) are different because of participant consent issues with a few of the participants in the focus group discussion. The findings also inspired part of Umeokafor (2016). Further, the number and types of respondent reported in this thesis differ from the aforesaid publications, but the findings are consistent. This chapter addresses research questions 1, 2 and objective 5. Presenting the overview of the methodology, this chapter refreshes the memories of the readers and goes on to describe the sample. This is followed by the thematic analysis with the summary as the last section.

7.2 OVERVIEW OF METHODS

This study employed a qualitative approach to research involving in-depth interviews (including some follow-up interviews) with Nigerian construction contractors and key informants (Table 7.1 & 7.2). The study involved the combination or mixed purposeful sampling (Patton 1990) where each sampling strategy (snowball and stratified purposeful sampling methods) addressed an/various objective(s) of the study. The stratified purposeful sampling was aimed at soliciting ‘information-rich-cases’, (Bowen 2008; Patton 1990) but factoring in the major variations of construction contractors in the Nigerian construction industry (Patton 1990), at the same time ensuring that those that would provide the relevant information in the industry are also sampled. This would help ensure that the data presented completely covers all the possible dimensions of views of construction contractors (Adami 2005). The stratified purposeful sampling involved four categories of the industry in the six geopolitical zones of Nigeria thus: large, medium, small and micro construction contractors in South South, South East, South West, North Central, North East and

North West. The definition of large, medium, small and micro contractors builds on Kheni (2008), which can be seen in the previous chapter.

To facilitate comparison and increase the theoretical contribution, the sampling also factored in constantly self-regulating contractors (CSRCs), non-constantly self-regulating contractors (NCSRCs) and non-self-regulating contractors (Non-SRCs). The perspectives and experiences of other people with a direct and indirect association or relationship with construction businesses (i.e. key informants) were sampled by snowball means. These key informants provided ‘information-rich cases’.

In ensuring trustworthiness in the research, multiple triangulation, involving person triangulation, analytical triangulation and method triangulation (i.e. multiple analytic approaches) was conducted (Adami 2005, Kimchi et al. 1991). This is in addition to other steps discussed in Chapter 6 such as peer debriefing. The person triangulation involved a group analysis of four groups, CSRCs, NCSRCs, Non-SRCs and key informants, facilitating constant comparison. The analytical triangulation involved thematic analysis (adopting inductive and deductive approaches), and constant comparison (Meadows & Morse 2001) to cross-validate the findings of the methods of analysis (cf. Kimchi et al. 1991, Lauri 2011).

The interviews were transcribed verbatim. Thematic analysis of six phases recommended by Braun and Clarke (2006) made up the data analysis stage. The analytical process involved reflection, taking memos and annotating while exploring the manifest and latent content including the relationship between codes, subthemes and themes. In this process, the analytical procedure of ‘asking questions’ as Basit (2003) notes, ‘line-by-line’ coding of the sentences were adopted. The saturation grid used during data collection and analysis to monitor when additional data do not contribute to the development of theory was adopted (Brod et al. 2009). More importantly, the quantification of some phenomena in this section is not for generalisation purposes, rather it improves credibility, ‘demonstrating the research of the analysis across the sample’ (Salmon 2013: 2).

7.3 DESCRIPTION OF SAMPLE

In qualitative research, presenting the characteristics of the respondents and their organisations helps in providing an in-depth understanding of how the findings emerged, showing what the respondents cover. It also contributes to improving trustworthiness in the research, as it helps in generating confidence and credibility.

Table 7.1: Summary of profile of participating contracting organisations in the research.
Source: the author field work.

Analytical group	Size of firm/(No)	Nature and/or Scope of operation	Structure of ownership/ (No)	Location	Total participants
• CSRCs	Large (7) Medium (2) Small (1)	Contracting, multinational, Nationwide, regional, building, civil engineering, facilities services, airport, telecommunication, oil & gas.	Foreign and Nigeria (7) Indigenous (3)	South South, South West, North Central South-East	10
• NCSRCs	Large (1) Medium (6) Small (5) Micro (2)	Contracting/consultancy, multinational (Africa), nationwide, locally, building, civil engineering, refurbishment, renovation, oil and gas, power.	Indigenous (14)	South East South South South West North West North Central North East	14
• Non-SRCs	Medium (1) Small (3) Micro (3)	Contracting/consultancy, refurbishment, building, subcontracting, renovation, regionally, locally.	Indigenous (7)	South South South East North Central North East	7
• Total					31

Key: constant self-regulating contractors (CSRCs), non-constant self-regulating contractors (NCSRCs) and non-self-regulating contractors (Non-SRCs).

Of all the interviewed contractors, Table 7.1 presents the demographic profile of 31 selected participating contractors, covering the four categories of construction contractors and the six geopolitical zones in Nigeria, their location. The organisations with the scope of operation: ‘national’, cover the whole country; ‘multinational’ cover both Nigeria and abroad; ‘regional’ cover few senatorial zones or states; ‘local’ cover a state. The column ‘location’ represents the geopolitical zone of the particular organisation, not the scope of operation of the organisation. Table 7.1 goes on to show that large, small and medium-scale contractors claim to constantly self-regulate in terms of H&S, covering only four geopolitical zones.

There is evidence that one large firm is indigenous and does not constantly self-regulate. The indigenous large contractor was considered not only because of its workforce that is more than 199 (Kheni 2008) but also because of its turnover, which

runs into millions of dollars. The said company is the only NCSRC with the scope of operation as multinational. All the large contractors in the CSRCs are foreign and indigenously owned with a multinational scope of operation. There are indications that CSRCs share one particular characteristic; they have the structural advantage in terms of expertise in their areas and services, finance, and politics. For the medium-scale construction contractors, there is evidence of few that are CSRC, and many NCSRCs, while many small-scale construction businesses are NCSRCs; few are Non-SRCs and one, CSRC. A few micro contractors are also NCSRCs and Non-SRCs.

Table 7.2: Summary of the profile of selected key informants —participating organisations with indirect/direct association/involvement in the industry/contracting firms. Source: The author’s field work

Scope & nature of operation	Role/association/relationship with the industry	No of participants
<ul style="list-style-type: none"> Regulatory body, nationwide. 	Regulates engineering practice including construction engineering personnel and establishment in Nigeria including ensuring the safety of structures from design to construction, health, safety and environment, investigate building collapse. Private practice: owner and manager of small contracting and consultancy firm	1
<ul style="list-style-type: none"> Senior staff Trade/industry association, nationwide. 	Trade or industry association role.	1
<ul style="list-style-type: none"> Insurance, nationwide 	Insures construction firms and employees	1
<ul style="list-style-type: none"> Regulates safety, state level 	Collaborates with other government bodies to oversee safety in all businesses, including construction industry in a state.	2
<ul style="list-style-type: none"> Legal firm, nationwide 	Involved in legal dispute resolution, including H&S	1
<ul style="list-style-type: none"> Academic and consultant nationwide 	Producing graduates who work in the industry, conducting research in construction. Consultancy: quantity surveying.	1
<ul style="list-style-type: none"> H&S consultancy firms Nationwide, Lagos state 	Helps contractors and clients comply with H&S requirements such as in Lagos state, offer H&S training, supervises H&S during construction	4
<ul style="list-style-type: none"> Structural Consultancy; Multinational 	Designers or consultants and members of the construction supply chain. They have the first contact with the client	2
<ul style="list-style-type: none"> Client organisation 	Financer or owner of construction projects	2
Total		15

Table 7.2 is a presentation of the profile of 13 participating organisations who are considered key informants; they have provided vital information on H&S in the construction industry because of their involvement or association with the industry. The scope and nature of operation, ‘academic and consultant’ (Table 7.2), identify respondent ZM who doubles as an academic and consultant (Table 7.3). While 13 selected key informants organisations participated, two respondents from the same H&S consultancy firm and two from the H&S overseer of a state took part, making a total of 15 key informants (Table 7.2).

Table 7.3 shows that respondents are well experienced in the industry covering its length and breadth and enabling them to provide experienced-based information. For example, respondent K, who has worked at operator level and works at management level is in a position to provide information from the tendering to completion stage and the politics at various levels in the organisation. Similarly, respondent ZL has worked as a safety officer, a civil engineer, a project manager and is now a consultant. Importantly, some respondents represent two perspectives. For example, respondents ZO and ZP (Table 7.3) double as both H&S consultants and H&S crusaders, providing their perspectives on both. Having worked in the industry to the level of a consulting quantity surveyor and currently as a lecturer, respondent ZM doubles as an academic and a consultant.

Table 7.3: Summary of respondents' profiles. Source: The author's field work

Respondents in the construction contracting firms			
ID	Occupation and/or designation	Characteristics of represented organisation	H&S Educational and/or professional qualification(s); description of experience
A	Regional H&S manager	Large scale multinational main contractor	<ul style="list-style-type: none"> Chartered Member Institution of Occupational Safety and Health (IOSH), Member, Institute of Safety Professional of Nigeria (ISPON). Over 20 years' experience in the industry.
B	HSE expert,	Medium indigenous scale consulting and contracting firm construction	<ul style="list-style-type: none"> National Examination Board in Occupational Safety and Health (NEBOSH) International, MSc. Over 20 years of experience a H&S expert but started as a builder in the construction industry
C	Quantity surveyor	Medium- scale construction business;	<ul style="list-style-type: none"> Less than 10 years' experience in public and private firms.
D	Project manager Civil Engineer and co-owner	Medium scale consulting and construction and civil engineering	<ul style="list-style-type: none"> More than 13 years in the construction industry. Worked on construction in oil and gas projects, worked for small construction firm as a civil engineer
E	Owner/Manger/St ructural engineer	Small-scale consultant and contractor.	<ul style="list-style-type: none"> Over 20 years of experience as a safety officer and Civil engineer for public and private firms
F	Builder/ Owner/Manger	Small indigenous contracting firm,	<ul style="list-style-type: none"> Worked for large multinational and medium scale firm as a builder
G	H&S manager	Large multinational	<ul style="list-style-type: none"> NEBOSH Diploma Worked for oil and gas sector, banking and public sectors before joining the construction industry
H	Chief Consulting civil Engineer	Small-scale indigenous Consultancy and construction	<ul style="list-style-type: none"> Worked as a safety officer, site civil engineer, for multinational and SME. Work in public and private projects
I	Architect	Large multinational	<ul style="list-style-type: none"> Worked in the oil and gas sector, public and private projects. Also works on private practice in his small and medium indigenous firm. Has over 10 years of experience as an Architect
J	Owner/Manager and Civil Engineer	Micro-scale contractor and consultant	<ul style="list-style-type: none"> Over eight years' experience in banking projects, residential buildings as a site and consulting civil engineer.
K	Director/Owner/C ivil Engineer	Medium scale indigenous firm.	<ul style="list-style-type: none"> Over 17 years of experience in the construction industry working from trainee engineer to the director level

ID	Occupation and/or designation	Characteristics of represented organisation	H&S Educational and/or professional qualification(s); description of experience
L	H&S manager	Large multinational firm; main consulting and contractor.	<ul style="list-style-type: none"> • NEBOSH International Certificate, MSc • Worked in Telecom industry, public sector and small-scale firm.
M	Civil Engineer/Project manager	Large multinational contracting firm	<ul style="list-style-type: none"> • Over 10 years of experience as a civil engineer both in an indigenous and multinational construction firm.
N	H&S Manager	Large multinational firm	<ul style="list-style-type: none"> • 10 years of experience in the construction industry.
O	Construction Manager/HSE overseer	Large-scale indigenous firm in civil and building construction.	<ul style="list-style-type: none"> • Level 3 HSE certificate, Shell HSE training, NISPON safety certified. • Over 16 years' post-graduate experience.
P	CEO/ Structural Engineer/	Indigenous Small-scale contractor and consultant	<ul style="list-style-type: none"> • Many years of experiences in the construction industry.
Q	QS/owner/Manager	Medium-scale consultant and contractor.	<ul style="list-style-type: none"> • Over 13 years of experience working in a public institution before going private.
R	Architect/Owner/Manager	Micro-scale consultant & contractor.	<ul style="list-style-type: none"> • ISPON Certificate • About 5 years of experience in the industry
S	Engineers assistant/construction manager	Small-scale consultant and contractor.	<ul style="list-style-type: none"> • ISPON Certificate. • Started as a draftsman, then a foreman before becoming a construction manager. Has 9 years of experience
T	General Manager	Medium-scale contractor	<ul style="list-style-type: none"> • Over 18 years' experience in the industry
U	Owner/manager	Indigenous small-scale contractor	<ul style="list-style-type: none"> • Over 25 years' experience in the construction industry including oil and gas
V	Owner/manger Civil Engineer	Micro-Scale consultant and contractor.	<ul style="list-style-type: none"> • Over 12 years' experience in building and road construction and maintenance
W	H&S manager	Large multinational contractor	<ul style="list-style-type: none"> • Over 8 years' experience in the industry including working with oil and gas and telecom sectors
X	Owner/Manager	Micro-scale Contractor	<ul style="list-style-type: none"> • Over 24 years' experience in the industry including telecom, informal sector, public projects.
Y	Owner/Manager	Small contractor and consultant	<ul style="list-style-type: none"> • Over 21 years experience in construction, including public and private sector.
Z	H&S Manager	Medium-Scale contractor	<ul style="list-style-type: none"> • NEBOSH certificate • Over 10 years of experience in H&S and 15 in the construction industry and oil and gas.
ZA	Owner/Manager	Medium- scale contractor	<ul style="list-style-type: none"> • Over 23 years' experience in the industry, covering public sector, consultancy and power sector
ZB	H&S officer	Small contractor and consultant	<ul style="list-style-type: none"> • MSc • Over 8 years' experience in construction
ZC	Project manager	Medium Scale contractors	<ul style="list-style-type: none"> • IOSH managing safely, Shell Safety training • Over 16 years' experience: worked in informal sector, telecommunication, oil and gas, and large contracting firm.
ZD	Owner/Manager/Builder	Micro-scale contractor	<ul style="list-style-type: none"> • Over 19 years' experience in the industry, including working for a multinational.
ZE	Site Manager/Engineer	Small-scale contractor	<ul style="list-style-type: none"> • Multinational H&S training
Key informants			
ZF	HSE expert, member of senior management	Regulatory body	<ul style="list-style-type: none"> • MSc, NEBOSH International • 28 years of experience as a health, safety and environment expert for various organisations in a state in Nigeria
ZG	Staff	Regulatory body	<ul style="list-style-type: none"> • Less than 5 years
ZH	Civil Engineer/top management/owner/manager	Engineering regulatory body	<ul style="list-style-type: none"> • Has over 27 years of experience in the industry including as an employee of the regulating organisations and running an indigenous micro-scale engineering & consultancy firm.
ZI	Insurance practitioner	Insurance	<ul style="list-style-type: none"> • Has over 7 years of experience insuring and handling construction industry cases.
ZJ	Lawyer	Law firm	<ul style="list-style-type: none"> • Has over 10 years' experience of handling incidents in the construction industry. Involved in dispute resolution in construction communities, health, safety

ID	Occupation and/or designation	Characteristics of represented organisation	H&S Educational and/or professional qualification(s); description of experience
ZK	Member	Trade association for senior staff.	and environment (HSE) issues. • Has over 11 years of experience in the construction industry
ZL	Civil Engineer	Structural consultant	• Over 12 years of experience as a site civil engineer and consulting Civil Engineer in a large multinational firm and a medium scale indigenous form. Also worked as a safety officer for a multinational firm
ZM	Quantity surveyor (QS), lecturer	Federal University Consultancy firm	• Contractor QS, consultant QS, worked for small indigenous firm; worked on private and public projects in universities; lectures in university in Nigeria and UK
ZN	Client	Client organisation	• Has over 10 years' experience in the industry.
ZO	MD/CEO/H&S expert/consultant	H&S crusading/ H&S consultancy	• Many H&S qualifications including an MSc • Former H&S manager, H&S adviser, accident investigator. Has over 17 years of experience in healthcare including in the industry.
ZP	Medical doctor/ H&S consultant.	H&S crusading/ H&S consultancy	• MSc • Has over 8 years' experience working with and in the construction industry, including accident investigation.
ZQ	Structural Engineer	Consultancy firm	• Has many years of experience working a consultancy firm also for a contractor.
ZR	HSE Consultant	H&S consultancy firm	• NEBOSH Certificate • Has many years of experience working in the construction sector and many years in H&S.
ZS	HSE Consultant	H&S consultancy firm	• ISPON- Certified safety personnel • Has many years of experience working in the construction sector and in H&S.
ZT	Permanent secretary	Public institution – Government – Client	• Has over 25 years of experience in the civil service.

Additionally, in Table 7.3, respondent ZH, an employee of a regulatory body that oversees engineering practices, is also an owner/manager/civil engineer in a small firm, thus able to present information from both perspectives. It is common practice in the industry that professionals engage in private practices in addition to their full-time jobs. Many of the respondents are registered Engineers with COREN, for example, respondents D, H, ZL and ZH.

7.4 APPROACHES TO CONSTRUCTION H&S SELF-REGULATION

The themes that explain the construction H&S self-regulatory approaches in Nigeria are presented in this section. Due to the nature of the industry, many NCSRCs have experienced or engaged in more than one self-regulatory approach.

7.4.1 Pure H&S self-regulation

As construction activities and sites are not covered by any local H&S legislation, if any contractor voluntarily self-regulates in terms of H&S without external intervention, it is labelled as 'pure H&S self-regulation'. There is evidence of voluntary adoption and administration of H&S standards, programmes, strategies

and/or policies including the National Building Code of 2006 in the Nigerian construction industry. Notably, there is a thin line between H&S management at small or micro firm level and pure H&S self-regulation. This is because, in some cases, the regulatory process covered in Section 2.6 is in line with and may be conducted alongside the regular H&S management process or internal policies. An architect's statement tends to be in line with the concept of voluntary H&S self-regulation:

'For the private sector ... if the contractor wants to develop or adopt and observe the safety requirements then he would. There is no general body regulating it' [R].

Another interviewee put it this way:

'In Nigeria, I will tell you that safety measures are an individual affair; it's just on an individual basis. If you like you do, if you do not like, you don't. Nobody cares except big contractors like Julius Berger or if you are working in the oil states' [K].

The H&S standards or measures adopted mostly centre on PPE requirements, fire safety standards, health, safety and welfare standards, developing safe working procedures, and H&S incentives. Evidence shows that in some cases, NCSRCs adopt H&S standards, at the preconstruction stage or even at the construction stage. However, when adopted at the preconstruction stage, it may not be fully implemented during the construction stage, according to the few respondents from NCSRC and key informants. There is evidence of 'cherry-picking'. Typically, many respondents from NCSRCs, especially small firms, note that when they voluntarily self-regulate, they only adopt the standards that they can finance, explaining why the aforementioned standards are mostly adopted in indigenous firms.

7.4.2 Mandatory/Enforced H&S Self-regulation

State encouraged compliance/co-regulation: One of the states in Nigeria, Lagos, was found to be the only state that appears to have a growing interest in H&S. This is because a reasonable number of CSRCs and NCSRCs with current or past experiences in the state and a few key informants have evidenced, suggested, or mentioned, that the LSSC in conjunction with Lagos State Building Control Agency, Ministry of Works and Infrastructure oversee H&S in the state's construction industry, a responsibility has been bestowed on LSSC by the Lagos state Safety Commission Law 2011 Cap 6 to oversee H&S in all socio-economic activities in the state, including construction.

LSSC claims that it adopts international standards; develops local standards, guidelines, code of practice, and rules; among many; educates the regulated, providing information alongside. However, it was unclear about the extent that these regulatory instruments are adopted by LSSC. A key informant, ZF, explains how the agency adopts regulatory instruments:

‘ We are not empowered to put all the laws in circulation and enforce it. We start with ILO and may stick it to national laws. We are allowed to use international laws and domesticate them. So, when we don’t find suitable laws we can use suitable international standards. We can use HSE publications from the UK, or UK H&S laws’,

When asked how they are able to establish a self-regulatory process across all industries, despite the federal laws, the Factory act of 2004; the respondent noted:

‘The state is entitled to legislate ... The way it works is the federal government law will be minimum, you the state knows your peculiarity and needs’.

When asked how the bodies cope with the fragmented nature of regulation of safety in the state, the respondent, ZF, was unable to offer a satisfactory explanation. Some respondents later held this issue against LSSC and co.

There is also evidence that before contractors commence work; they have to obtain a compliance certificate from the LSSC after the contractors must have satisfied other requirements such as producing a pre-construction plan, visual, oral, and writing assessments. The accounts of few contractors with activities in the state, some key informants evidence that the LSSC provides goal-based requirements. For example, the contractor or the client would have to come up with a safety ‘manual’ detailing how compliance will be achieved. Key informant ZF expands:

We are not prescriptive but we give guidelines to the person. We cannot say “hire eight people” and you can’t afford it. We leave it up to them- how they want to do it. Whether they are hiring temporary or permanent staff, it is their own kettle of fish but their basic safety should be done. We have Fire Safety Plans and how they do it is up to them. They come up with a compliance schedule and an action plan. Our inspectors will also monitor this so that they will get it right. If they do not have the capability they are encouraged to seek the attention of Registered Safety Practitioners, who can help them out but is not prescriptive. Our goal is voluntary compliance, we want people to develop the safety culture.’

While some key informants agree with ‘ZF’ that regulatory agencies such as COREN, Fire Service Commission, and LSSC inspect and monitor projects at various stages

from inception to completion of projects, the accounts of some respondents show the downsides of the regulatory procedures of LSSC. For instance, while the account of ‘ZR’ below corroborates the account of ‘ZF’ above, ‘ZR’ goes on to show that the goal-based approach, adopted by LSSC, creates room for deception by the regulated, but creates room for innovation as well. ZR said:

‘The LSSC just have a skeletal provision, for example, make sure you have safety signs, ... they do not go into details. You can choose to use the British standards safety signs or American standard safety signs. It is up to the contractors or the client to draw up their own HSE manual. Some contractors develop HSE manual that is very ambiguous and it gets approved, but they cannot implement it; they just wanted to get it approved. For example, some people would put in their H&S policy that for every five site workers, there will be a safety officer and a nurse assigned to them, on standby. That means that if you have 50 workers, you must have 10 safety officers and 10 nurses on standby. So paying 20 personnel to be on stand-by is not logical; in financial terms, it does not make sense. When you make a policy like that, you find yourself compromising during implementation’.

Other issues noted by both a few contractors and key informants from the state suggest a form of targeted enforcement by LSSC, which the respondents view more or less like a routine, which is now well known in the industry. The issues are not limited to: corrupt practices; only inspecting and monitoring construction activities on large projects, new projects and projects with a high tendency of yielding huge fines; announcing inspections with precise dates. The respondents view LSSC activities as just about showing your permit and approval after which thorough inspection will not take place. While this is consistent with the ‘tick-box’ attitude below, it also encourages and creates a wrong impression among contractors and/or clients of what compliance is. According to these respondents, the regulator does not embark on adequate creation of awareness prior to imposing sanctions through which they create room for ‘negotiation’ and then, in turn, bribery and corruption. Furthermore, very few of the respondents (NCSRCs and Key informants) suggest or show how the multiple actors in health, safety and environment issues regulation result in complex regulatory process, ‘unpalatable’ partnership, indicating a high level of external involvement (Section 8.5.7). Consequently, a few respondents conclude that the regulatory activities of LSSC and co are illegitimate, highly bureaucratic and unfair. However, a few praised state government for its attention toward safety.

Other external influences: A few multinational and indigenous contractors and key informants confirm the regulatory influence of some regulatory bodies whose activities overlap in the construction industry, for example, the ministry of environment, NESREA, local authorities in Lagos State. According to the respondents, the aforesaid regulatory bodies enforce environmental laws in areas such as noise and pollution. A few indigenous contractors and key informants also highlighted the regulatory impact of COREN, but a few indigenous contractors view their regulatory activities as weak and open to corruption. A builder expands:

'They are interested in helping or supporting us, they neither offer advice nor direct us where to get advice on H&S. We have problems, we do not know where to go. They are always concerned about building collapse' [F].

Foreign or company policy-oriented H&S self-regulation: Although few respondents, for example, ZO, ZP & ZJ, question the activities of some multinationals arguing that the standards are lower in Nigeria and that there is evidence of pretence in some of their activities, almost all the respondents mentioned or demonstrated that multinationals in Nigeria have a better H&S record, standards, and attitude. This was explained by evidence from respondents (many CSRCs, NCSRCs, Non-SRCs and key informants) who note that multinational contractors adopt H&S legislation, standards, policies, and procedures from developed countries such as the UK. These H&S laws include the work at height regulation, the noise regulation, the fire safety legislation to name but few. The work procedures in the UK and the enforcement and inspection methods are all adopted from countries such as the UK. According to many multinationals, they have company H&S policies that govern the affairs of all their branches all over the world. These policies are the minimum that will apply in any country. Thus, in countries such as Nigeria where there is no local H&S law covering the construction industry, the minimum applies. Respondents mirror this:

'As a multinational, we are bound by international standards and programmes, they guide our activities wherever we work, they are the minimum that we have to adhere. So in Nigeria where there are no H&S laws, we apply international standards. [G].

'Like I said, I work for a multinational construction company so we bring in what applies in our sister offices in countries like the UK, Germany, US, and we try to apply it to our own system here in Nigeria. It is still self-regulation because we put programmes, policies and plans in place. Not necessarily waiting for the government because they are not going to come [A].

We have a general company policy that applies to all our branches worldwide, the policy contains the minimum H&S standards and procedures that should guide construction activities. Most of these standards that we used are informed or similar to what happens in Italy, Germany etc., but they are just a little different in terms of how they are applied as each country has its own requirements. It is vital to ensure consistency in standards worldwide so as to protect our reputation. What happens in one country affects the other, but we still have a monitoring and auditing system from the head office, so we cannot just do what we like. [I].

Furthermore, there was evidence of innovation in enforcement among some contractors. According to an H&S manager, he developed a strategy that encourages self-compliance among the employees. In particular, the head office encourages all branch H&S managers and subcontractors to address all the workers by attaching the name of their child or one of their children, for example, ‘Papa Femi’. With this, when the employees are working and during toolbox talk, these employees are reminded of their family and loved ones in that if they want to return home healthy, they should work safely and report anyone that engages in unsafe practices. Other innovative strategies include contextualising H&S (Section 7.4.6).

As a result of the regulatory instruments that the multinationals have to comply with, some SMEs are then involved in H&S regulation and even indirectly covered by the adopted policies and standards from developed countries, causing a chain effect. Meanwhile, foreign H&S standards and practices significantly inform contractors.

Chain effect: The domino effect of the multinationals self-regulating is found. This is where according to some NCSRCs and key informants who demonstrated or stated or suggested that due to the parent company policies or international H&S laws these multinationals are bound by, the multinationals, in turn, set standards, rules, procedures which SMEs will have to adopt or adapt. The multinationals and/or the subcontractor also go on to enforce and monitor the H&S practices with steps such as ‘*Recommended Update Follow-up System (RUFUS) for low-risk situation and ‘Stop Work Order’ for high-risk situations*’ [Respondent M]. Some start at the prequalification stage where the H&S records of these SMEs are factored in. A key informant, ZP, typifies the above:

‘Some years ago, I did work with a construction company and the reality is that in Nigeria, it’s dependent on the size of the company. The very small companies do not have any interest or

concern about health and safety because to them it's not a key part of it. The medium-sized construction companies, because they have to get contracts from the bigger companies who have the interest in H&S, what essentially brings those medium sized companies to the H&S table is just to meet a requirement of the bigger companies and not really because they have an interest in it. And of course, to the larger multinational construction companies, it's a thing of meeting the requirements that their international mother-company imposes on them. These are the three major companies and what emphasises their actions'.

The chain effect is expanded on below, showing how main contractors and other contractors work 'hand in hand':

'Before we give contractors the job initially, we know the exact requirements, because we must have done the job hazard analysis as regard to the job that the subcontractors are about to do. The subcontractors will have a safety officer who gets the permit to work from us before he/she goes into the site. Although the subcontractors have a safety officer, we oversee the job they do so our policy is interwoven into theirs. So it is double safety they do' [L].

This is not to say that the above standards are effective in all projects of these large multinational contractors as respondent A narrated how the high standards in their organisation do not cut across all their projects because of communication gaps. Thus, the quality of H&S once subcontracted is questioned despite the inclusion of subcontractors in some main contractors' H&S training and programmes. There was, however, no evidence of negotiation, information and education, targeted enforcement. Reputation management or incentives approach all, which have been covered in chapter two, the regulatory process.

7.4.3 Industry H&S self-regulation

There is overwhelming evidence of the contributions of the oil and gas sector, the banking sector and telecommunication sector on H&S in the Nigerian construction industry. Almost all the respondents agreed, mentioned or demonstrated that the oil and gas sector sets standards for contractors or businesses that work in the industry, monitors and enforces the standards. Because the oil and gas and the banking sectors consider H&S when prequalifying contractors, some contractors self-regulate. For instance, Pre-mob is a requirement for all contractors. This is where the contractors meet certain requirements including getting their equipment certified before and during construction and insuring their employees and equipment. Hence, it is commonplace. This is in addition to completing a vendor registration form where the prospective contractor demonstrates their H&S credibility perhaps by showing a H&S

manual or certification or a strong history of client references before prequalification to bid or accepted in the market. Two respondents narrate how it happens:

'HSE at industry level predominantly spans from companies like Shell, AGIP, TOTAL and CHEVRON and all those big oil and gas companies. If they want to construct structures whether it's through CSR projects or through their platform, they engage a construction company. They force you to work with their standards. So it's not a matter of negotiation, it's a matter of compulsion. It is a prerequisite in your overall relationship with the company. So they give you the standards because they commission you to do that job for them. It does not stop here; they go on to monitor your activities' [X]

'In Nigeria, there is no institution that regulates safety generally. What happens here is that different organisations or industries have their own safety requirements. For instance now, if we have a job in Shell or Total, they have their regulations that they work with, so our documents must be up to date based on their requirements because they will come for auditing. When they come for auditing they will see if we have the capacity, including safety to handle that project' [I].

As a result of the commitment of these industries, contractors engage in some unethical practices such as window dressing to win contracts (Section 7.5.5).

It may be tempting to class industry H&S self-regulation as client-led H&S self-regulation, but they differ. In industry self-regulation, there are indications that the regulatory instruments and methodology are consistent, homogeneous and a norm in the industry, while in client-led H&S self-regulation, various clients have standards and methodologies. The stakeholders and activities in the industry regulation share similar characteristics, for instance, in oil and gas, there is a high level of risks in the activities, but in client-led self-regulation, the reverse is the case as the characteristics of the clients and activities are different and are not bound by industry relationships.

7.4.4 Client-led H&S self-regulation

Unlike CSRCs, Many NCSRCs have experienced client-led H&S self-regulation. However, while few of the respondents from CSRCs narrated their experiences of client-led H&S self-regulation while working for SMEs, they also noted clients as a driver of H&S in the industry. The experiences of the respondents centre on clients specifying or requiring that H&S standards, policies, programmes, inter alia, be adopted or developed; they then go on to monitor and enforce the process perhaps through the consulting companies or themselves, with sanctions for defaulters. Some of these clients who are international organisations such as World Bank or corporate

organisations such as banks, in some cases, strongly consider H&S records and clients' history of the construction businesses as a prerequisite at prequalification stage. Furthermore, a few respondents, for example, ZL, also demonstrated the collaborative measures between the client and the contractor. However, few local clients, according to few respondents, also lead H&S, but the standards are not as thorough as those obtained in international clients' projects. A few respondents from NCSRCs and key informants have experienced occasions where the government set standards but these are not implemented during construction. The experience of respondent [D] while working for an SME imitates the thesis here:

'In a World Bank sponsored project that we were to design for them, when we submitted our things, they came to our office to inspect to know whether we know what we are saying and if we can do it. When they went back they gave us the job because we had what we said we had including the safety part — everything needed. They even came to inspect when we were working'.

Another respondent who worked on another World Bank project echoes:

'World Bank specified the things they wanted us to do on safety so we did as they wanted. They also sent their own safety and environmental team to come and assess the site and make sure that all those things are being upheld. Most companies do it when a client enforces it but when a client does not care about safety, the company may have it but they won't practise it. Like most government projects have safety policies but they don't care about it' [ZL].

There was no evidence of negotiation between the client and the contractors, which can be explained by the strategic position of the client in the supply chain. Client-led self-regulation is different from client influence as a driver of H&S self-regulation in that in the former, the client is involved in the entire regulatory process (Section 2.6), but in the latter, the client just insists that H&S standards be adopted.

7.4.5 H&S crusader-led regulation

Evidence from very few key informants shows that social actors enforce H&S standards, policies, laws through consultation, inspection, naming and shaming the organisations with poor H&S records or those with ostensible H&S practices. Evidence from a couple of NCSRCs indicatively supports this concept of H&S crusader-led. According to an H&S crusader, they support organisations through consultation, helping them develop and implement H&S plans. They go on to even engage in overt and covert inspections. In some cases, the companies voluntarily

approach the H&S crusader for support or ‘vice-versa’ as a result of covert inspection or whistle blowing. The account of Respondent ZO reflects the discourse:

‘...Most times we go around and spot these pretentious acts or spot those hazards or spot those false safety processes and we expose them (He talks about how they name and shame these organisations) or tell them that those things they are doing are not in line with H&S practices but that’s all we can do, we can’t really go beyond that’. You realise that we can’t really hold them to ransom because we are crusading for health and safety laws in the country. We know what to do but the lack of legislation does not allow us. But, we have put together the group of lawyers called counsel of accident claim lawyers and what we are looking at is when the law comes into existence and we have people who violate these processes and they are found culpable, we should be able to take them to court but because the law is not there we have nothing to hold’.

Respondent ZO in highlighting the challenges they encounter such as inadequate H&S, indicates the role of social actors if there is adequate legislation. Nonetheless, the enforcement strategy of naming and shaming may improve compliance, but this may be limited to multinationals. H&S crusader-led is different from social pressure (a driver of H&S self-regulation) in that those external actors such as pressure groups, the media, *inter alia*, pressure organisations to engage in H&S but these social actors are not involved in the regulatory process.

7.4.6 Community-led H&S self-regulation

The accounts and experiences of more than half of the respondents, including a key informant provide evidence that some communities are actively involved in H&S regulation. However, the evidence points to its occurrence in mostly oil-producing communities (the Niger Delta region) and a little in non-oil producing communities, suggesting the role of geographic location in self-regulation. Generally, some communities where construction projects take place insist that contractors adopt H&S procedures, negotiate with the contractors on H&S procedures, set the scope of the H&S procedures through representatives such as Community Liaison Officer (CLO), community leader. Consequently, contractors working in these communities contextualise H&S, factoring in their cultures and norms in H&S and the environment, security and community affairs resulting in a local professional term ‘CASHES’- Community Affairs, Safety, Health, Environment and Security. However, in some cases, these communities insist that H&S activities be outsourced to them. But the communities do not engage in H&S if outsourced to them, according to many respondents. One respondent confirms the above and the wrong motives for H&S:

‘The community insists on H&S due to the fact that most of them are aware now. But the problem is, they are not insisting on safety because they care about their safety, they want the money. Most times they will even tell you they don’t want you to bring anything for them as regards H&S... instead, their leaders will tell you to bring the money’ [M].

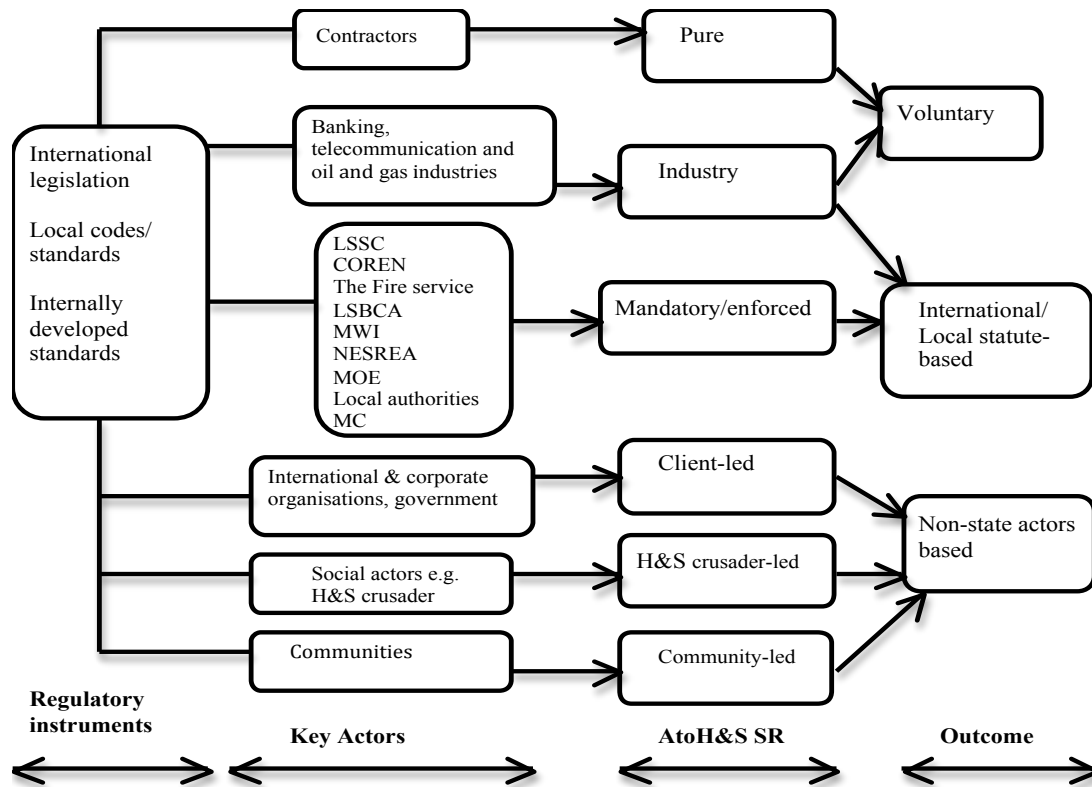
Nonetheless, these communities then go on to monitor the H&S activities of these contractors through their representatives or safety officers that they insisted that the contractors employ from the communities. The enforcement instruments of these communities include sabotaging the activities of the contractors, negotiating with the contractors, kidnapping the employees of the contractors, using diabolic measures or rituals, reporting contractors to client organisation or the media. These are in a few cases targeted. They also go to the extent of shutting down the construction site through protesting the poor H&S standards or incidents or just for their financial interest so that the contractor will ‘settle them’ — pay some money. However, the multinationals were found to have the ability to absorb or withstand community influence, especially as regards compromising H&S standards, more than the indigenous contracting firms. Few CSRCs who are multinationals indicated or claimed to take advantage of the requests of the communities, improving the knowledge of H&S and their relationship with these communities.

However, in addition to some activities of the communities above which pose concerns, some of these communities also view H&S as a means of making money (See enrichment in Section 8.5.5.4). Some of their activities result in: poor relationships between the contractors and the communities and between the contractors and the clients; increase in construction cost; conflict among members of the communities; insecurity of contractor employees; contractors compromising H&S.

‘For instance, if there is oil spillage or health issues, instead of doing the right thing maybe ... addressing the health issues, the community will ask the contractor to settle them with money and leave the oil there or the health concern. This company will now weigh which one is cheaper, everyone is looking at what will be cheaper and not what will be better healthwise, and can decide to give them money’ [Respondent D].

There was, however, no evidence of incentive-based approach and economic regulation nor the community providing education and information for the contractors, rather, they may recommend the consultant that the contractor should employ. Figure 7.1 summaries the emerging key realities of the approaches and key

actors in construction H&S regulation emphasising, the multiple actors and legislation from various contexts, and a distributed regulatory system. Table 7.4 summarises the differences among the regulatory approaches.



Notes and Keys: AtoH&S: approaches to H&S self-regulation; MC: multinational contractors; MOE Ministry of Environment; MWI: Ministry of Works and Infrastructure; LSBCA: Lagos State Building Control Agency. The key actors include institutions whose activities overlap in the construction industry.

Figure 7.1: Summary of the emerging current realities of the approaches and key actors in construction H&S regulation The author’s field work

Table 7.4: Differences in the approaches to construction H&S self-regulation. Author’s field work.

Differentiating Features	Approaches to construction H&S self-regulation					
	Pure	Industry	Client-led	H&SC-led	Community-led	Mandatory/enforced
• Statutory requirement		Indirect				Direct and indirect
• Consistent/standardised procedures		Yes				Yes
• Regulatory instrument enforcer	Contra.	Industry	Client	Contra. & H&SC	Contra. & Community	The state and/or the contractors
• Setting regulatory instrument	Contra.	Industry	Client and/or Contra.	Client and/or Contra.	Contra. & Community	The state and/or the contractors

Key: Contractors — Contra; H&S crusader — H&SC.

7.5 ATTITUDES OF THE NIGERIAN CONSTRUCTION CONTRACTORS TOWARDS H&S SELF-REGULATION

Table 7.5 shows a summary of the attitudes of Nigerian construction contractors towards H&S self-regulation, which are discussed in this section.

Table 7.5: Summary of the attitudes of contractors towards H&S self-regulation: Source: author's fieldwork

Themes (Explanations)	Subthemes	Evidence
<ul style="list-style-type: none"> Secondary (Less important) 	<ul style="list-style-type: none"> Reactive Secondary Convenience 	<ul style="list-style-type: none"> Self-regulation after incidents Self-regulation is at basic level Affordability Capacity Choice
<ul style="list-style-type: none"> Arrangement (Plan for self-regulation) 	<ul style="list-style-type: none"> Enforced Context-defined Unorganised 	<ul style="list-style-type: none"> Compulsory Coercive Nature/size of client or project or company Geographical location-defined Unsystematic process Not a thought through procedure An incomplete process
<ul style="list-style-type: none"> Responsibility (Duty) 	<ul style="list-style-type: none"> Organised Accept H&S responsibilities Irresponsibility 	<ul style="list-style-type: none"> Structured and organised process Strong leadership commitment. 'We are in this together'. Individual company efforts. H&S self-regulation is a favour. Shift H&S self-regulation to others
<ul style="list-style-type: none"> Camouflage (Intended at hiding the truth or something) 	<ul style="list-style-type: none"> Window dressing Deceit 	<ul style="list-style-type: none"> Appear to ostensibly self-regulate Demonstrate prospects of H&S self-Regulation. Create fake H&S records and department Hire temporary H&S personnel for H&S accreditation.
<ul style="list-style-type: none"> Primary (More important than other things) Tick box (Emphasis on following rules) 	<ul style="list-style-type: none"> Exploitation Innovation High on priority list Meet requirements 	<ul style="list-style-type: none"> Lower standards compared to country of origin. Exploiting family sentiments Involvement of management Do the following without reading meaning into it: Fulfill all righteousness Meet requirements in industry of operation Meet requirements for prequalification tendering or prospective contract purposes.

7.5.1 Arrangement

Unorganised and/or incomplete

To some indigenous contractors, H&S self-regulation is an afterthought, it is not planned; in many cases, it is informal, unsystematic and uncoordinated, according to a few CSRCs, some NCSRCs and few key informants. There is evidence that this occurs in a few NCSRCs. Sometimes, standards are adopted or set at the

preconstruction stage, but not carried out during construction. Standards can be adopted at the construction stage due to the complaints from the communities or incidents, as few CSRCs have experienced while working in SMEs, suggesting a reactive attitude noted below. This unorganised approach to H&S self-regulation was mostly experienced when SMEs voluntarily self-regulated. This concept is depicted below:

‘When we decide to do H&S on our own, I will say that it is not as organised as when we work in the oil and gas sector or in Lagos state. Our H&S plan is not fully carried out. We can start and stop at anytime of the project.’ [E].

Additionally, based on experience, ZP, a key informant, throws light on the discourse:

‘I have my experience in the SMEs construction companies. In the developmental stage(s) of any contract, it is hardly brought up as an issue — H&S. I am not going to speak for the entire construction industry. It is at the implementation stage that it is brought up maybe because it is a requirement from another. Probably we need to get a safety person with regards to safety. With regards to health, a lot of times I have seen there is a provision for health on site. Maybe the provision of first aid, basic first aid. The quality of the first aid might be a different thing but there is usually a first aid kit around in my own experience. It’s not like any thought process is being put into it. It’s just an afterthought. There is really no thought process behind protecting or promoting the health or safety of people’

Conversely, self-regulation with CSRCs is structured, covering the regulatory processes in Section 2.6.

Context defined/based

Due to the various types of self-regulation in the industry, and the dysfunctional state of the H&S environment in the industry, there is the understanding and attitude in the industry that the quality or thoroughness of H&S regulation and the level of commitment are determined by the context. For instance, the evidence elsewhere in this chapter that quality and approach to H&S in Nigeria by multinationals is not consistent with what obtains in their countries of origin, suggests that they exploit the poor and dysfunctional H&S regulatory environment of Nigeria.

In terms of ‘size context’, the evidence in various places in this chapter contributes to this premise. As a result, many SMEs have a ‘context-defined’ attitude towards H&S. This is supported by the direct views and experiences of many CSRCs, NCSRCs and Key informants. Additionally, the premise established so far in ‘responsibility’

(Section 7.5.2) that self-regulation is only for those working in the oil-producing states, Lagos state, and for the multinationals also contributes to the conclusion of ‘context-based’ understanding to H&S regulation.

The opinions and experiences of two keys informants, few CSRCs and NCSRCs contribute to ‘context-defined’ attitude towards H&S self-regulation in term of project and client contexts. One respondent explains:

‘In this industry, we follow each client or project differently. The understanding and financial power of private clients are different from that of the government or MTN. So ‘we cut the coat of each client according to their size’ in H&S, else the client will just go. We approach H&S based on the size of projects’ [Q].

Nonetheless, while the above quote suggests a perceived attitude to ‘water down’ standards based on the context just to get contracts, there is another pattern among few NCSRCs where the context defines the methodology of self-regulation.

7.5.2 Responsibility

H&S as a responsibility determines the level of commitment to H&S, including its regulation. In Nigeria’s construction industry where the regulatory environment is complex, fragmented and dysfunctional, responsibility significantly underpins H&S self-regulation. The understanding of H&S as a responsibility was mainly found to occur in two key ways: accepting H&S as a responsibility, and shifting the H&S responsibility to others. There tends to be an understanding among Non-SRCs that H&S is only the responsibility of a particular group in the industry, for example, large contractors or the contractors that work in the oil and gas sector. This is corroborated by the views of a few key informants, many NCSRCs, Non-SRCs and the experiences of a few from CSRCs where some even generalised it across the industry. Furthermore, there was evidence demonstrating that a few NCSRCs view H&S as an obligation to permanent staff only, neglecting the casual workers. The understanding that permanent staff should be prioritised, even when H&S self-regulation is based on affordability in SMEs across the industry was consistent with the views and experiences of many respondents. Even when some small and micro contractors acknowledge the responsibility in some projects, there is usually a dispute between the client and contractors whose responsibility it is, according to a few respondents. As the small contractor does not want to lose the projects, they discriminate in

implementing H&S measures or they will pass the responsibility to the employees. Some view it as a favour to the society. Another way that H&S responsibility is not accepted is demonstrated in ‘convenience’ (see Section 7.5.6).

Conversely, the views of two NCSRCs and five CSRCs corroborated by four key informants view that H&S responsibility is well accepted and centre on: strong leadership commitment in that ‘we are in this together’ and ‘H&S is an individual company effort’ (see ‘primary’: Section 7.5.4); the understanding that it is a duty to self-regulate (Section 8.5.3); social actors accepting H&S as a responsibility (Section 7.4.5). They take responsibility of the H&S of their employees and perhaps adopting the basic regulations such as PPE regulations, or some parts of the Construction Design and Management regulations of 2015. The leadership skill is exhibited in various ways as Chief Executive Officers can take responsibility for visiting some sites or branches to inspect sites prior to the commencement of work or during construction. Further, while a few in the industry view H&S as a moral and/or social responsibility, a few key informants and NCSRCs contested the view.

7.5.3 Tick box

Understanding H&S, its regulation and the imperativeness, drives a positive attitude towards H&S. Many SMEs self-regulate: to meet the requirements or conditions for tendering, to stay in the jobs, in preparation for prospective contracts, to meet the requirements in industries such as oil and gas. Some do not read meaning into the entire process nor consider the efficiency of the entire regulatory process. As a result, a few do not transfer the knowledge and experiences to other projects. The quote in the theme ‘secondary’ below by respondent D doubles in contributing to ‘secondary’ and this theme. Tick box attitude is also evidenced in the ‘enforced self-regulation’ where LSSC regulatory activities show a tick-box attitude to compliance, with a tendency to institutionalise a wrong perception of what compliance is.

7.5.4 Primary

Despite the discouraging attitudes of contractors towards H&S, there is plenty of evidence of positive and encouraging attitude towards H&S where H&S is among the core objectives or high in the priority list of the contractors. The evidence, in spite of the contextual environment of Nigeria, which does not support H&S that some

contractors self-regulation, is encouraging. There are some in the industry for whom H&S self-regulation is higher on their priority list. Many CSRCs demonstrated how there is leadership commitment in H&S self-regulation, which has a chain effect in the industry. For instance respondent G typifies:

‘When I prepare H&S enforcement, inspection and auditing strategies, and procedures, I send it to the management here, the head office. I will get to defend it in a board meeting. On one occasion, my boss abroad joined us online. If they are satisfied, I will get it signed and sent to all the regions in Nigeria. Because the management signed, showing commitment, other employees at various branches and subcontractors adhere to it.’

The innovation in enforcing H&S noted in ‘enforced self-regulation’ (Section 7.4.2) to exist in multinationals (— sentiments: exploiting family attachments), which has a chain effect on other contractors shows a positive attitude towards H&S.

7.5.5 Camouflage

This is about ‘window dressing’— what you see is not what happens. There is evidence from the account of many CSRCs and NCSRCs and a few key informants that construction businesses ostensibly self-regulate: to get contracts, to be socially legitimate, to be employee or industry legitimate. However, there is no consistency in the motives or how these occur among the categories of contractors.

Ostensible self-regulation or demonstrating prospects of self-regulation to get contracts, which also depicts a ‘tick box’ understanding, also provides evidence to the understanding of ‘window dressing’ among contractors. False evidence of self-regulation in previous projects or H&S capabilities is in some cases provided to convince the prospective client or to meet the criteria for operating in some industries such as oil and gas. This mostly occurs among SMEs in the industry, including in oil and gas sector projects, according to some respondents. The quotes below tend to adduce the above:

‘People think that oil and gas is perfect, but a lot of indigenous contractors even lie sometimes because they have to put a lot of things in place, to get contracts. They claim that the workers are under a health organisation even when they are not, just to get a job [Respondent M].’

‘Well, I will use my own company as an example. When we are vying for all these government projects, we always create a fake safety department. It does not really exist; it

is for us to get the job so that when they come for inspection they will see that we have everything required, that we have taken all the measures. We now present to them a safety department with a (fake) safety manager who will now tell them how we are going to ensure that we take safety precautions while doing the job. I believe all or most of these construction companies are like that' [K]

It is indicative that some H&S experts from multinationals or in the oil and gas sector are viewed as experienced and competent in their fields. Consequently, the SMEs that 'window dress' to get contracts, temporarily hire these experts from multinationals or from oil and gas to set up temporary H&S departments or act as consultants for them, only to dissolve the department after the contract is awarded. However, if the client will monitor and enforce the H&S standards or procedures, they do not engage in this unethical practice.

In terms of multinationals, few key informants, NCSRCs and CSRCs view or have experienced that multinationals also play games. They demonstrated that the 'game playing' centres on: lower standards compared to what obtain in their countries of origin, superficial activities, being socially legitimate, plenty of talks with disproportional actions or steps.

'When I was working for a multinational (name withheld), the rate at which we inspect or audit or the thoroughness of our regulatory practices are low compared to what obtains in other countries. There is a lack of currency here, lack of innovation etc. once the communities are happy, then that is ok. You have to make it look like you take H&S seriously, put things and policies on your website, and billboards. Ensure that you adopt the standards that people see, but this only occurs in low-risk projects' [respondent U].

Another respondent typifies how multinationals exploit the dysfunctional H&S regulatory environment of Nigeria, 'watering down' the standards in some cases. Typically,

'...For the fact that the industry understands the political landscape means that the government itself does not seem to care about its populace. That is why you find a lot of multinational companies (I don't want to be specific) in the construction industry treating Nigerians with disdain because they don't care and they don't provide them with what they need to do the job safely. But if they were in their own countries, they would act a lot better [ZP].

This perception of multinational ‘playing games’ may not be, as it seems. This is because a respondent in acknowledging the lack of uniformity in H&S standards across their locations, suggested that it was not a conscious management action, rather a function of the attitude of H&S personnel or projects managers at these locations. On the other hand, there are indications that some NCSRCs exploit the opportunities of working for large firms or the oil and gas sector to improve their H&S knowledge and skills with the hope of advantage during procurement.

7.5.6 Secondary

When H&S is not among the project parameters of a company, or if it is low on the priority list, it is axiomatic that H&S performance will be poor. The opinions and experiences of many respondents, including key informants, provide evidence to conclude that there is a strong secondary understanding and attitude towards H&S self-regulation in indigenous businesses and informal projects. H&S is not viewed as among the criteria for success, not taken seriously. This can be further explained by attitudes such as, reactive convenience and enforced. For instance:

‘There are very few, especially the multinationals, that are perfect in that they try to transfer the way they operate in their country to this country, but most indigenous companies don’t view it seriously’ [Respondent E].

An extract of a quote in ‘chain effect’ (Section 7.4.2) also corroborates the above:

‘The very small companies do not have any interest or concern about health and safety because to them it’s not a key part of it’ [Respondent ZP].

Reactive

The reactive attitude to incidents on site and the communities’ intervention due to poor H&S during construction in indigenous businesses and medium-sized projects was demonstrated or experienced by many respondents from both NCSRCs and Key informants. This reactive attitude is viewed more as a way of life in Nigeria as will be seen below, especially in the media and government. A respondent expands:

‘I am not sure if it is a Nigerian thing or a construction industry thing. But the fire bridge approach or culture that we have reflects highly in terms of H&S. With the exception of the oil and gas sector, large contractors and in Lagos state, the proactive approach to H&S self-regulation is not there. There must be an incident. In some cases, the policies and procedures may be there, MAY, but the implementation is a function of an incident’. I would like to think that is more of a ‘Nigeria factor’. It is not an integral part of the

industry and many companies [M]. [Also see respondent DH's quote in section 7.7.2.3, Nigeria factor].

The above quote contributes to the reactive attitude towards H&S self-regulation; the point of H&S not being an integral part is also mentioned. A point indicative among Non-SRCs but demonstrated or mentioned by a few NCSRCs and key informants. In corroboration, Respondent D indicates that it is more of a 'tick box':

'H&S in the construction industry: many in the industry don't see it as a critical part or an integral part of the construction process. They see it as one of those things that needs to be done and not like an integral part of the construction process which when neglected can lead to a lot of fatalities'.

Convenience

There is evidence in few NCSRCs that they understand self-regulation, as 'convenience' thus will self-regulate when convenient. The premise established so far in this study such as in pure self-regulation, supports this. Admitted that many NCSRCs self-regulate, to a lot of them, it is based on affordability, choice and capability, resulting in adopting basic regulations in some cases. This may be commonplace in the industry among indigenous contractors as some respondents show. In particular, respondents not limited to Z, G, ZJ, R, T, G, ZO, ZP, ZT, and W demonstrate or mention that indigenous contractors, avoid self-regulation as much as possible and that only a few businesses are an exception. Interviewees' comments epitomise this attitude:

'H&S self-regulation is perceived as an inconvenient addition. More or less, it's something that if they have a way of bypassing it, a lot of companies would rather bypass it because a lot of times over confidence and complacency comes in.' [ZO]. 'Even if they have not been doing it safely but the fact that nobody has gotten injured or whatever it is makes them feel that there is no point maybe having a safety practitioner on site. It becomes an inconvenience more or less for most companies in Nigeria. That's the perception most companies have, especially the SMEs [ZP].

Enforced

There is evidence that the understanding of the industry towards H&S is that they must be forced to self-regulate because it is secondary in the contractor's agenda. While this is arguably a driver of self-regulation and denotes a type of self-regulation, this is explained by the understanding that H&S self-regulation must be 'enforced'.

This is underpinned by experiences, suggestions, demonstrations or statements of few CSRCs, many NCSRCs, and key informants.

As a result of everything in this theme, it is logical to conclude that the point covered in the theme ‘convenience’ where self-regulation centres on the basis of regulations such as PPE regulations, welfare regulations, may explain a lot covered so far in the current theme ‘secondary’. The attitude of self-regulating at the basic level contributes to the theme ‘secondary’ as it is a result of H&S not being high on the priority list or H&S being a core objective in the industry or companies. This view of H&S self-regulation at the basic level is supported by the views of many.

7.6 SUMMARY

This chapter has presented the results of the first facet of the study, which sought to identify and explain in term of H&S self-regulation, the approaches in the Nigerian construction industry and the attitudes of the construction businesses towards it. There is evidence of client-led H&S self-regulation where clients specify H&S standards, programmes, inter alia, be adopted and implemented. The clients then go on to enforce and monitor the processes. While many NCSRCs have experienced the client-led H&S self-regulation, few CSRCs narrated their experiences while working for SMEs. Industry H&S self-regulation was acknowledged, demonstrated or suggested by almost all the respondents to occur in the industry. This tends to be significant and impactful with measures such as prequalification of contractors by the industry. Granted that there is also evidence of pure self-regulation with no external involvement, many small NCSRCs ‘cherry pick’ in self-regulation. On the other end of the spectrum is enforced H&S self-regulation which manifests in two key ways: state encouraged compliance and foreign or company policy-oriented self-regulation. Other types of H&S self-regulation found are H&S crusader-led and community-led.

The attitudes of construction contractors towards H&S can be explained as secondary, enforced and context-defined. Further, the attitudes of contractors show that H&S is only done when it is convenient, viewed as the responsibility of some particular groups in the industry and conducted in an unstructured manner. While H&S self-regulation is viewed as a camouflage for some contractors, it is primary to some.

CHAPTER 8: THE SECOND FACET OF THE RESULTS — DETERMINANTS OF CONSTRUCTION H&S SELF-REGULATION

8.1 INTRODUCTION

Adopting the framework for analysing the determinants of construction H&S self-regulation (in Chapter 5 and Umeokafor & Isaac 2015a), this chapter presents the second facet of the results, the empirical data on the direct and indirect determinants of construction H&S self-regulation in Nigeria's construction industry. These findings are based on the qualitative survey, involving in-depth interviews with stakeholders in construction contracting firms in Nigeria. These findings are published in Umeokafor (2016, 2017a) and inspired Umeokafor (2017b). Addressing research question 3, this chapter also addresses objectives 6 and parts of 4. To avoid repetition, the overview of the methods reported in Chapter 7, which is also applicable here is only outlined. The results represented here also draw on the description of sample in Section 7.3.

8.2 OUTLINE OF METHODS

Chapter 6 details the methodology and Section 7.2 presents its overview, this section outlined the methods used in the study. Through in-depth interviews with Nigerian construction contractors and key informants, data was collected. A combined or mixed purposeful sampling technique were utilised so as to adequately address the objectives of the study. However, the sampling involved factoring in key informants, and the extent of self-regulation thus: constantly self-regulating contractors (CSRCs), Non constantly self-regulating contractors (NCSRCs) and Non-self-regulating contractors (Non-SRCs). This helped in constant comparison and increased theoretical contribution. The deductive approach of the thematic analysis using a framework for analysing the determinants of construction H&S self-regulation by Umeokafor and Isaac (2015a) was adopted. This also involved exploring latent and manifest meanings including relationships between codes, subthemes and themes.

8.3 DETERMINANTS OF CONSTRUCTION H&S SELF-REGULATION

This section and Figure 8.1 present the direct and indirect determinants of H&S self-regulation. A framework for analysing the determinants of H&S self-regulation (Umeokafor & Isaac 2015a) in the construction industry in Chapter 5 was adopted.

Figure 8.1 presents a graphic illustration of the emerging themes and explanations or topical issues. It also shows the direct determinants of construction H&S self-regulation where there was evidence and no evidence of influence(s) from the political, social, institutional, and cultural environments.

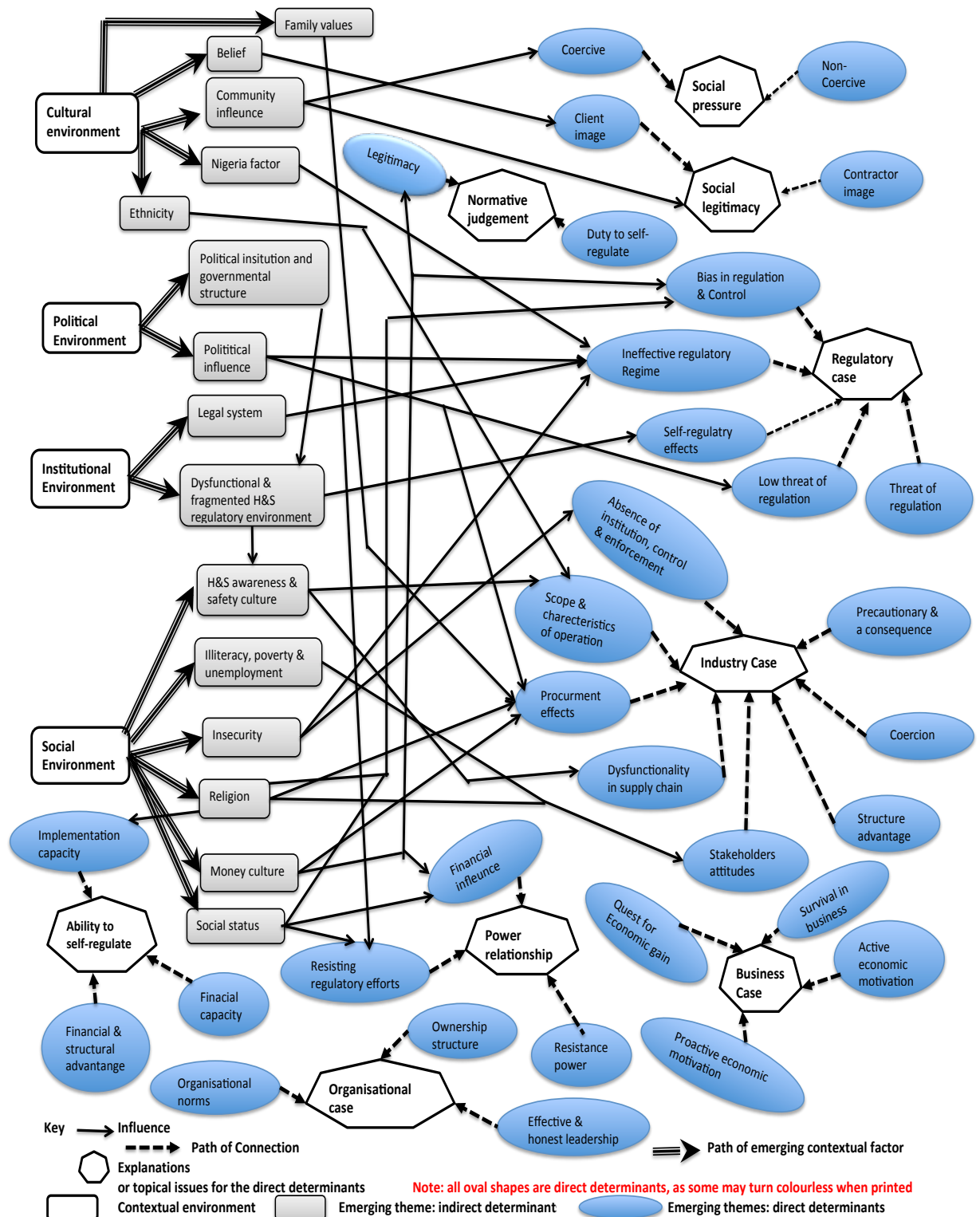


Figure 8.1: Spider diagram of the summary of the direct and indirect determinants of construction H&S self-regulation. Source: The author's field work.

8.4 CONTEXTUAL ENVIRONMENT AND INFLUENCE — INDIRECT DETERMINANTS OF CONSTRUCTION H&S SELF-REGULATION

The construction environment that the construction contractors operate in, contextual environment, act here as secondary or indirect determinants of H&S self-regulation (Figure 8.1). They are the institutional, cultural, social and political environments that produce contextual factors that are *‘dynamic forces within the ...external environment of organisations influencing its activities, perception, beliefs and attitudes’* (Umeokafor & Windapo 2016: 286).

8.4.1 Institutional environment

There is evidence of a dysfunctional and fragmented H&S regulatory environment in Nigeria, resulting in, among many, a lot of regulatory actors in Lagos state whose activities are fragmented. As earlier stated in enforced self-regulation, these activities result in normative issues where some contractors in Lagos state view the regulatory activities as illegitimate, bureaucratic and unfair. The dysfunctional and fragmented H&S regulatory environment of Nigeria also impacts on the ‘regulatory cases’ (Figure 8.1) in that there are indications that the level of state involvement tends to be high which a few respondents in SMEs and a few key informants do not find encouraging. Further, there are claims and indications that the dysfunctional and fragmented H&S regulatory environment of Nigeria results in complex, fragmented, varying, and heterogeneous self-regulatory regimes. This is well expanded in the ‘regulatory case’ (Section 8.5.7). This mostly explains the evidence of weaker enforcement powers among some non-state regulatory actors (such as H&S consultants) in the industry and client-led self-regulations and the differences in attitudes towards H&S stemming from demographic differences.

Conversely, it can be argued that as demonstrated in various places in this chapter, the dysfunctional and fragmented H&S regulatory environment of Nigeria results in flexible regulation, which appears to be better than state regulation.

Another institutional environment issue highlighted by the few contractors and key informants is the legal system of Nigeria. While the lack of adequate H&S legislation was strongly stressed as a big hindrance to the judicial system, the impact of the lengthy court cases on H&S was also described or mentioned.

‘For instance, there was a building collapse involving a prominent person (name withheld). Because of the person’s influence and the delay in court cases in Nigeria, a lot of similar cases are not taken to court. Because he is high in the society, ... he was given a different type of treatment than would be given to ordinary people ’ [Respondent ZH].

While the above quote contributes to the institutional environment, it also contributes to ‘power relationship’, an element of the analytical framework. Figure 8.2 summaries the direct and indirect determinants of construction H&S self-regulation emerging from the institutional environment.

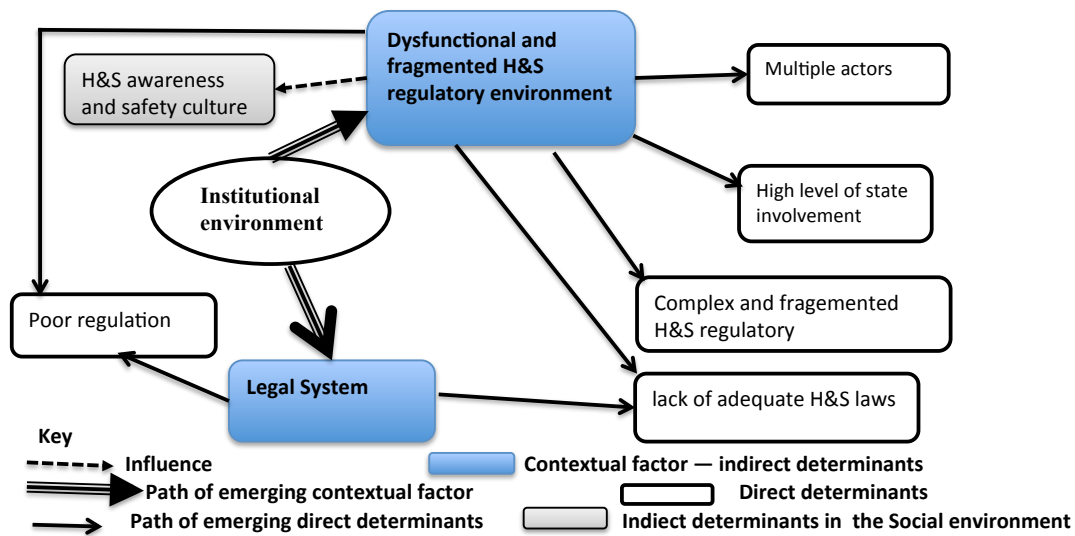


Figure 8.2: Summary of the direct and indirect factors of construction H&S self-regulation in the institutional environment. Source: The author’s field work

8.4.2 Cultural environment

8.4.2.1 Community influence: this has been noted in community-led regulation. Evidently, the communities influence the activities and decision-making in the industry and organisations. For businesses, communities influence the corporate cultures of organisations making them contextualise H&S and the industry and organisations to self-regulate. These communities, however, negatively impact on H&S as seen in community-led H&S self-regulation (Section 7.4.6).

8.4.2.2 Ethnicity: There was no consensus on the influence of ethnicity on decision-making in small or micro businesses. While very few NCSRCs view that the ethnicity of workers in an organisation or a project determines the level of priority that H&S gets, suggesting if H&S self-regulation occurs or not, a few respondents disagree. There was no further evidence to support or refute the point. Nonetheless, if the points

of the few NCSRCs were anything to go by, it would be a secondary driver under implementation capacity (Section 8.5.9.2). Nonetheless, there was evidence to conclude that there are differences in the attitude of communities in terms of H&S due to the geographic location of projects resulting in a high or low level of commitment to H&S. This is where in the South South of Nigeria, communities exploit contractors while in the South East and Northern parts, they support contractors working in the local communities because they view the contractors as development instruments (Section 8.5.5.4). This suggests ethnic differences.

8.4.2.3 Nigerian factors: This relates to the issues that the respondents view as inherent in Nigeria that have turned to norms if not cultures. These ‘Nigerian factors’ as the respondents show, mostly impact on the organisations and go on to also influence the elements of the framework and explain the determinants of H&S self-regulation. Typically, very few in the CSRCs and NCSRCs talked about what centres on ‘lack of follow-up culture in Nigeria’ or ‘the culture of abandoning projects or policies or programmes’; so many of respondents in the NCSRCs, Non-SRCs and few key informants demonstrated or felt that there was a generally a poor attitude and culture towards safety. As a result, in their view, there is: inadequate governmental and political involvement in H&S; inadequate H&S laws; a few people in positions to improve H&S view life itself as a risk thus little needs to be done. The clients who are the cultural environment are influenced as well, leaving some with a poor attitude towards H&S — industry case. A few of them opine that this poor general perception of H&S results in a poor level of H&S awareness which determines the ability of the industry to self-regulate including the activities in the industry.

Another ‘Nigerian factor’ emphasised by just a very few in both the Non-SRCs, NCSRCs and key informants centre on the reactive culture in Nigeria. Their view is that social groups, media, government should be proactive and not pressure organisations to address H&S issues after incidents. They also suggested that these reactive norms or culture in Nigeria also impact on the regulatory activities of the regulatory institution, making them reactive to events. This reactive understanding to H&S has been noted in the theme ‘secondary’ in Section 7.5.6. A respondent typifies the reactive culture from the upper echelon of power:

When the church in Lagos collapsed, the government went there to examine and assess the situation to determine if the collapse was due to foundational failure or due to an addition of what is not in the plan. The government was supposed to have gone to see if they had H&S in place and not when the incident happens Nigerians will begin to cry, which is medicine after death [ZM]

8.4.2.4 Family values: this manifests in two ways, as a few NCSRCs and many Non-SRCs show, centring on: family members interfering in the mostly small projects that are procured informally; family values informing the allocation of contracts or influencing contractors' choice of a subcontractor, again in small projects in the informal sector. Consequently, the ability of the contractor to self-regulate is determined. The experience of respondent J captures this subtheme:

'I can remember one project for a client (name withheld); the contract sum included H&S. There was a man called Ogbura, a relative of the client. He was always on site, works as the client representative. The client then handed over the project to Ogbura because he was going abroad. Ogbura subtracted all the funds for H&S, there was no way I could contact the client as only Ogbura had his number. Ogbura is not experienced but because the client said he should supply some materials and bring some people that will do some parts of the jobs cheaper, we let him handle them. All the materials he supplied were rubbish, and we could not engage in H&S. Family members are not good for business.'

In Figure 8.3 is a graphic illustration of the direct and indirect determinants of construction H&S self-regulation.

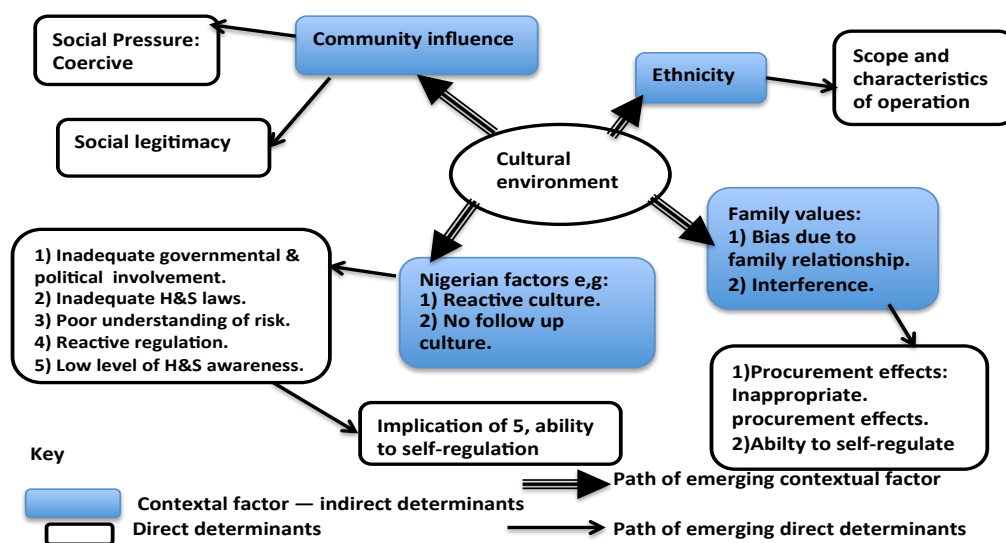


Figure 8.3: Summary of the direct and indirect factors of construction H&S self-regulation in the cultural environment. Source: Author's field work

8.4.3 Political environment

Political institutions and government structure: Here, there was a consensus among NCSRCs, CSRCs, Non-SRCs and very few key informants. They view and/or demonstrate that there is a lack of governmental or political attention towards H&S. This, according to the respondents, results in the: dysfunctional H&S regulatory environment; ineffective regulatory regime; and low threat of regulation (Figure 8.1). The respondents emphasised that because of lack of political institutions and structure, there is a lack of H&S regulatory institutions, which should create regulatory threats in the construction industry — regulatory cases. There was a general perception that the government should be in the ‘driving seat’ of H&S. Offering academic and practitioner views; respondent ZM epitomises the situation:

‘If you see the developed countries and say that everything there is working, those things are working because there is a system that makes them work. Everything is centred on the government setting up policies. The government has to do a lot of things like creating an appropriate H&S legislation governing construction work. For example, enforcement of H&S policies and procedures by the government and then provision of H&S laws particularly a local version. The federal government must establish H&S regulatory agencies. The government has a role to play which includes H&S education and training for all the organisations in the construction industry’.

In affirmation: because the government is not intested in H&S that is why H&S is poor. The government and the politicians would rather wrongly use their political powers to hinder H&S enforcement, award contracts to their friends who are not qualified and care less about H&S. Imagine, an H&S bill, I cannot remember the name has been with the president for years, but he has not signed it’. [Respondent W]

The client is pivotal in the construction supply chain and can drive H&S to a great extent. However, the reverse is the case here where the government, the client, awards contracts to politicians who do not care about H&S, as respondent W models. These politicians may in some cases, subcontract the projects to qualified persons but at a very low rate that H&S becomes secondary. Request for H&S funds by the contractors fall on the ‘deaf ears’ of the politicians who can use their political influence to address any H&S regulatory issues, if necessary. This also results in ‘power relationship’. Conversely, very few key informants view that the

responsibility for H&S should not only be that of the government, rather a call for acceptance of H&S responsibility by all.

A few key informants explained or mentioned how politicians would influence the regulatory activities of regulating institutions, reducing the regulatory threat, which should make organisations comply. As earlier stated, the extent of regulatory involvement determines if organisations comply with the law. For few NCSRCs and Non-SRCs, the impact of political influence is different as it impacts on the industry in terms of procurement and not on regulatory issues. The following Figure, 8.4, graphically illustrates the discourse, showing the political environment and the emerging direct and indirect factors of construction H&S regulation.

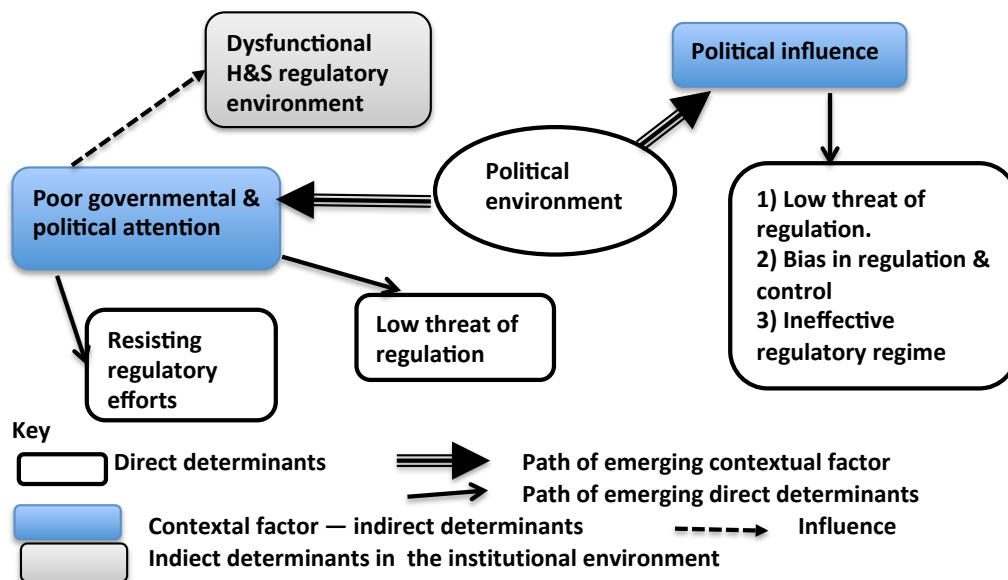


Figure 8.4: Summary of the direct and indirect factors of construction H&S self-regulation in the political environment. Source: Author’s field work.

8.4.4 Religion and Social environments

8.4.4.1 Religion: Religion and culture are closely related but different. People can be of the same culture, but of different religious beliefs or faith. Although very few NCSRCs and key informants do not view religion as influential on H&S decisions, few CSRCs, NCSRCs, Non-SRCs and key informants view, demonstrate or suggest that religious beliefs and religious underpinned discrimination are among the manifestations of religion in Nigeria. However, it impacts on the groups differently. These, in turn, determine decisions in organisations and the industry and even determine the poor H&S behaviours and attitudes of the workers.

Typically, for the industry case (Figure 8.1), during the awards of contracts, a few respondents from NCSRCs and Non-SRCs have experienced religious bias towards a particular religious group, determining who wins the contracts. For the implementation capacity, ability to self-regulate case (Figure 8.1), a very few NCSRCs have experienced bias towards people of a similar religion in terms of enforcing internal H&S activities, neglecting the unsafe practices on the construction sites of a person of similar religious faith. According to so many in all groups of analysis, generally in Nigeria, the religiousness of Nigerians results in the belief that the supernatural can protect or that incidents are destinies, thus little or nothing should be done in terms of H&S. Here, some respondents mirror the thesis:

'Our people believe in God so they feel safety is of God. That health and protection is of God so they leave everything to God and not do anything so it has affected what we ought to do to be safe and to be in good health. That is their kind of mentality. Our religion has affected this. Also, people think that even when things need to be done, that there should be a preference for persons of the same faith. A Christian that is supposed to do something for a Muslim may not support or give him the advice in terms of H&S. An inspector visited a site some days ago, and I was there because the site manager is of the same faith with him, he did not inspect the site and just certified the site as environmentally sound. [D].

'Nigeria has become so religionalised that we have forgotten about thinking of our own personal safety. Somebody will see a naked wire and you tell the person that this wire ...can lead to an accident in this place and the person says God forbid. But I believe the same God has given us wisdom...but we have neglected our brains and keep involving God. We want to create all the work for God but God also expects a whole lot from us where we are failing. It has become a part of Nigeria contextually that we see things that are going wrong and everybody seems to overlook it. It is part of our culture' [ZO].

8.4.4.2 Insecurity: There were just a few perceptions on this issue among the respondents. Respondent ZH narrated an experience where the security of inspectors was threatened by politicians, affecting the regulatory activities and impacting on the extent of 'regulatory threat' on the regulated. This corroborates and contrasts the experiences of the contractors under community-led H&S self-regulation where contractors risk being kidnapped, verbally and/or physically abused. It contrasts in that to the communities, kidnapping, verbally and physically abusing the contractors

is a form of deterrent and a way of enforcing their demands, but corroborate, as contractors are insecure.

8.4.4.3 Illiteracy, unemployment and poverty: a few CSRCs, NCSRCs and key informants respectively view that the level of illiteracy in Nigeria tends to be highly emphasised in the construction industry. This can be explained by the nature of activities, which involve a lot of unskilled labour and labour intensive procedures, attracting many uneducated people and poorer people in a country with a high level of unemployment. This is in addition to the lack of adequate training of many Nigerian construction workers in the industry. As a result of all the above, these workers do not know their rights, they cannot sue their employers when their rights are breached. They are just interested in working, disregarding the working conditions. Consequently, a few decisions in small and even large companies are made without taking cognisance of the H&S of the workers, as the respondents suggest. The same is applicable to the government who takes no cognisance of the H&S of the masses, thus have the poor attitude as demonstrated in many places in this chapter. Furthermore, clients' level of literacy and wealth influences compliance with H&S requirements as many across the analysis groups show. The more educated and literate a client is, the more the client is likely to support H&S.

8.4.4.4 H&S awareness level and safety culture: just like the high level of illiteracy dominant in the industry, the generally low level of H&S awareness in the industry is emphasised by the respondents. In an environment where H&S awareness is very low and in some cases nil, it becomes highly challenging for construction contractors to get clients and workers to support or be part of their self-regulatory programmes. There was a general consensus among CSRC, Non-SRC, and NCSRCs on the implications of the generally low level of awareness on their H&S programmes; an issue supported by many Key informants. However, the way this impacts on the three groups of analysis differs a little. Indeed, for the CSRCs, it manifests more in terms of the community-led H&S self-regulation in that as much as the communities drive H&S, there are 'pockets' of people in the society whose attitudes do not show a good understanding of H&S, (e.g., those that exploit them) hence do not support H&S. CSRCs went ahead to suggest that although the low skilled workers are trained, some of them tend not to transfer the H&S knowledge to other similar works, failing to

inculcate a safety culture in all they do. The same was applicable to NCSRCs but then goes further to include some clients who they struggle to convince to consider H&S in their projects. For the Non-SRC, while they also face the same issues with clients, they tend not to push for H&S as the NCSRCs do. The low level of H&S awareness mostly manifests in the attitude of the casual workers who are so oblivious of H&S. A key informant whose activities present him with the responsibility of assessing construction sites, activities and workers comments:

A lot of people don't really understand the whole concept of H&S. They don't understand the need to work safely or they don't understand the different aspects when it comes to safety. For example, in construction safety, it is not just about wearing your PPE, it's also about listing procedures, how to receive basic things and quality of goods and other things like that. It's a process they don't really understand because their basic awareness procedure is not as it should be done. Toolbox meetings are seen as something "big" to clients or construction firms/personnel [ZS].

ZS modelled the level of H&S awareness in the construction industry in that the entire H&S concept is poorly understood. ZS goes on to offer a possible explanation for the emphasis on PPE as a standard of comparison to H&S best practice, and one of the mostly adopted H&S regulations.

Nonetheless, the institutional environment can contribute to explaining the idea here, as there is no institution with effective and functional responsibility of sensitising people in terms of H&S. It is coherent to conclude that the background established so far results in the poor safety culture in the country, a point stressed and demonstrated by CSRCs, Non-SRCs, NCSRCs to impact in their organisations. Some key informants echoed this. There were, however, accounts of a good understanding that awareness of H&S drives H&S among clients and/or contractors.

8.4.4.5 Money culture: many CSRCs, Non-SRCs, NCSRCs and key informants emphasise or demonstrate that there is a general belief and attitude that money can address almost all issues in Nigeria. Consequently, many of the respondents stressed that the money culture manifests as bribery and corruption affecting: procurement practices and the regulatory activities of the regulating agencies (Sections 8.5.7.1, 8.5.5.3, 8.5.6.3). However, it appears that corruption is acceptable, more like a norm if not a culture. Thus, drawing on the position of Umeokafor and Windapo (2016), in

the context of Nigeria, while corruption is a dynamic force making it a contextual factor, it possesses a low degree of dynamism and impact with a high level of influenceability. Thus, in managing contextual factors in construction projects corruption may be receiving little attention (Umeokafor & Windapo 2016).

8.4.4.6 Social status: There tends to be a link between the status of clients or organisations in the society underpinned by cultural beliefs and superstitious beliefs, and power relationship, manifesting in the elements: regulatory case and power relationship. For instance, for the regulatory case, the state regulatory actors were found to be biased while carrying out their activities because of the positions of contractors in the society (bias in regulation and control: Section 8.5.7.1). Then for power relationship, the decision of the organisations to self-regulate is informed by the outcome of their influenceability assessment informed by their political and/or societal influence (resisting regulatory efforts: Section 8.5.6.2) Although, there is a common saying in Nigeria that ‘nobody is above the law’, this appears to be lip service, as the respondents demonstrate the reverse. Figure 8.5 shows how the contextual factors that emerge from the religious and social environments relate to the direct factors of construction H&S self-regulation and the institutional environment.

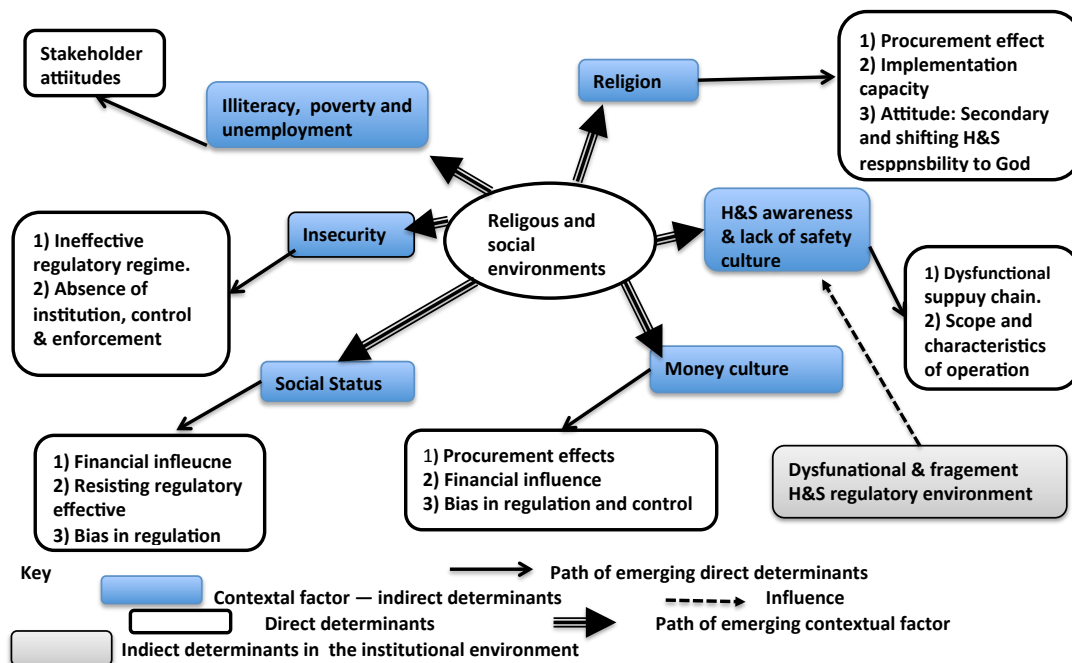


Figure 8.5: Summary of the direct and indirect factors of construction H&S self-regulation in the religious and social environments.

8.5 DIRECT DETERMINANTS OF CONSTRUCTION H&S SELF-REGULATION

Table 8.1 details the direct determinants of H&S self-regulation in Nigeria's construction industry in Figure 8.1, which emerged from the study, covering the explanations or topical issues, subthemes/evidence and emerging themes.

Table 8.1: Summary of the direct determinants of construction H&S self-regulation. Source: The author's fieldwork.

Topical issues/ Explanations	Emerging themes	Subthemes/Evidence
Social Legitimacy	<ul style="list-style-type: none"> • Client image • Contractor image 	<ul style="list-style-type: none"> • Clients get contractors to self-regulate because of client image. • Few contractors self-regulate because of their images.
Social Pressure	<ul style="list-style-type: none"> • Coercive • Non-coercive 	<ul style="list-style-type: none"> • Pressure from community, trade union, pressure groups, media. • Lack of media pressure. • The negative influence of subcontractors of high social or religious status on other subcontractors.
Normative Judgment	<ul style="list-style-type: none"> • Legitimacy • Duty to self-regulate 	<ul style="list-style-type: none"> • Illegitimate H&S laws • Illegitimate activities of a state H&S regulator • Illegitimate regulatory activities of communities • Moral principles to self-regulate <i>as per</i> H&S • H&S viewed as a responsibility • Lack of morals among contractors
Organisational case	<ul style="list-style-type: none"> • Ownership structure • Organisational norms • Effective and honest leadership 	<ul style="list-style-type: none"> • Multinationals self-regulate more than indigenous contractors • Corporate culture and norms • Management commitment to H&S
Industry case	<ul style="list-style-type: none"> • Absence of institution, control and enforcement • Structure advantage • Dysfunctionality in supply chain activities • Procurement effect • Stakeholders' peculiar attitudes • Precautionary and a consequence • Coercion • Scope and characteristics of operation 	<ul style="list-style-type: none"> • Professional institutions lagging behind • Lack of employee unions on sites • Lack of sensitisation from institutions • Lack of an institution responsible and accountable for H&S • No accountability from businesses • Leverage of large businesses in procurement • Financial advantage of large firms • Involvement of large firms at design and construction stages • Ability of large firms to maintain H&S standards despite client pressure • Absorb the request of the communities • Inadequate client involvement • Incompetence of the workforce • Tension between parties in the construction supply chain • Subcontracting • Inconsistency in the nature of workforce • Compromising and sacrificing H&S in procurement • Inappropriate procurement system • Unethical practices in procurement • Supply chain effects • Enrichment • Contractor exploitation • Proactive steps to prevent incidents • Reactive steps to prevent further incidents after the incidents • Industry and state requirements and enforcement • Main contractor requirements and enforcement • Workers association and social actor requirements • Client influence • Scale of project and risk • High commitment in some sectors and geographic locations • Nature of activities

Topical issues/ Explanations	Emerging themes	Subthemes/Evidence
Power relationship	<ul style="list-style-type: none"> • Resistance power • Resisting regulatory efforts • Financial influence 	<ul style="list-style-type: none"> • Large contractors take advantage of their expertise, technology and financial power to uphold H&S standards and resist client or community pressure to compromise H&S. • Resist regulatory activities with political or social powers • Financial influence of community and state regulatory activities
Regulatory case	<ul style="list-style-type: none"> • Bias in regulation and control • Ineffective regulatory regime • Self-regulatory effects • Low threat of regulation • Threat of regulation 	<ul style="list-style-type: none"> • Bias in regulation and control at state actor level • Bias in regulation and control at organisational level • State actors: Inability to effectively regulate • Poor regulation of H&S • Lack of adequate H&S laws • Inconsistent and complex regulatory regimes • Less powerful non-state actors • Excessive external involvement and actors • Low threat of state regulation • Threat of regulation from state and non-state actors
Business case	<ul style="list-style-type: none"> • Quest for economic gain • Striving to survive in business • Active economic motivation • Proactive economic motivation 	<ul style="list-style-type: none"> • Client economic gain • Contractor economic gain • Fear of losing casual workers to others due to self-regulation • Overlook H&S to stay in business • Agree to self-regulate to win contracts but no funds from client • Increase in productivity • Status preservation • Leverage
Ability to self-regulate	<ul style="list-style-type: none"> • Lack of financial capacity • Implementation capacity • Financial and structure advantage 	<ul style="list-style-type: none"> • Lack financial capacity • Dissension within the organisation • Sabotage • Financial and structure advantage

8.5.1 Social legitimacy

While community-led regulation can suggest social legitimacy, it appears to occur mainly as a motivator of H&S self-regulation, in terms of clients and contractors.

8.5.1.1 Client image: significantly, the experiences of very few NCSRCs, including their experiences in the informal sector, arguably redefine the discourse incorporating and drawing attention to the role of cultural beliefs in achieving social legitimacy in terms of H&S. This is where very few NCSRCs narrated how their clients would require them to adopt basic H&S measures to avoid fatality in the projects in fear of the community or society accusing the client of money rituals. Money ritual is where a person is accused of killing or causing the death of another for enriching him or herself through diabolic means. While it does not ‘hold water’ in court, it is a serious issue that can damage the image of people in the society, making them become socially illegitimate. In other words, social legitimacy for a client is now a secondary driver where the client is the main driver of H&S. This tends to be interrelated to the

social environment or cultural influence where it can be classed under beliefs. A further interesting and revealing finding, suggesting camouflage is the little evidence among NCSRCs that in a bid to be socially legitimate, corporate clients would invite the media to report on projects where their contractors are self-regulating, using that as a selling point. The client must have informed the contractor of the visit, ensuring that H&S is at its optimum.

8.5.1.2 Contractor image: there was very little evidence of self-regulating to protect the image of the firms; however, there was no agreement among the groups of analysis. Some NCSRCs, CSRCs and key informants view or suggested that contractors self-regulate because of their images and not to be socially legitimate locally. Rather, it is to avoid economic loss that will be incurred if contractor image is damaged to the international communities and industry. Conversely, very few key informants and NCSRCs view that only a few will self-regulate to be socially legitimate. Furthermore, there is limited evidence and indications that many SMEs have little concern for their image, as against large contractors who may be more concerned about their image. These NCSRCs who strive to be industry legitimate do so because they have a good understanding of this. So if NCSRCs are industry legitimate, they have an advantage at the procurement stage, a point covered later in the topical issue, business case (Section 8.5.8). It can also be argued that multinationals, who are viewed as ostensibly self-regulating to please the public, as noted in ‘camouflage’ (Section 7.5.5), and very few indigenous contractors that self-regulate to please their staff is evidence of social legitimacy.

8.5.2 Social pressure

While the framework of analysis shows that this may mostly manifest in coercive means, the findings of the research show that it can also manifest in a non-coercive manner. Although very few participants contributed to this, social pressure was well captured in two ways involving mainly the media, pressure groups, community and trade union/association thus a demotivator and a driver.

8.5.2.1 Non-coercive: as a demotivator, very few CSRC and Key informants demonstrated how the media have not lived up to expectation, resulting in the lack of faith in the media. According to these respondents, because the media have failed to

report H&S issues, many businesses know that their images will not be tarnished and nobody will know about their poor H&S practices. Nonetheless, there was a general view that mainly large construction businesses are more susceptible to media pressure than smaller firms. The view of a key informant acknowledges the attitude of the media towards H&S and appears to understand their plight of the media:

'The media do not see H&S as important only to report few significant incidents after the occurrence and even fail to follow it up. Issues like the kidnap of the Chibok girls, other political issues gain so much attention and are followed up, unlike H&S. Even if you draw their attention to helping you write about the lack of government attention such as the unsigned H&S bill, they just dismiss you; they tell you that it is will not make a good read. That it is not news. I understand the media because they make plenty of money from writing on what makes a good newspaper read, but they should understand that we are disappointed in them. They should address H&S issues at least in terms of improving awareness' [Respondent ZJ].

Additionally, there were indications of social pressure demotivating small businesses from self-regulating and evidence of social pressure influencing small businesses not to self-regulate. Organisations of high social or religious status in the society who are expected to live by good examples, adhering to safety requirements as agreed do otherwise.

8.5.2.2 Coercive: For the drivers, in contrast to social pressure demotivating construction businesses, there is evidence to conclude that among few NCSRCs, pressure from the community would make them self-regulate. The account of a respondent is summarised and refined so as to ensure absolute anonymity.

The respondent recounted how their organisation worked in a community and people in the high echelon of the society approached them, speaking on behalf of the community, requiring that H&S be considered in the project. According to the respondent, because of the political influence of the people, they had to self-regulate as they are unable to match them politically.

Further on drivers, understandably, only the key informants noted the influence of trade unions or associations in driving H&S at the national level. They, however, acknowledged the influence of trade unions at company level in ensuring that companies self-regulate and remain adamant in that regard, a point strongly stressed by very few CSRCs and NCSRCs, expanding that these requirements are mostly basic

requirements or regulations such as PPE that are less effective in the risk control hierarchy. However, in some cases: these unions lose focus; companies interfere in their activities; companies do not allow trade unions membership among employees. Equally, a respondent's comment is below:

'Most of the time if you see a construction site that has a strong union, those unions are out to enforce H&S...However, in recent times now, the trade union has been politicised and bastardised that the election is conducted by the construction companies and maybe one of the elected executives may still be an employee of the company' [ZL].

It is, however, possible that the self-regulatory process will only stop at adopting H&S standards. The rest is up to the workers.

Equally important, very few NCSRCs and so many key informants shared their experiences or views that the media, pressure groups have on some occasions made the industry or construction contractors self-regulate. A significant experience of a respondent is summarised:

The comments show how the community tried to stop unsafe and unhealthy activities of a large company but all to no avail. The community then resorted to contacting pressure groups, an H&S crusader and the media who took various steps to stop unsafe and unhealthy practices. However, the respondent and a few others decried the lack of follow up in these cases resulting in the contractors reverting to normal practices after about 2 -3 months when the tension generated by the issues had calmed down.

8.5.3 Normative judgment and/or motivation

As stated in Chapter 5, this occurs in two ways where legitimacy (of the law, the regulatory activities — the sense of fairness) and moral duty/obligation to self-regulate inform the decision-making process of the regulated to self-regulate.

8.5.3.1 Legitimacy: there was evidence of decisions to self-regulate driven by legitimacy, according to CSRCs, NCSRCs and key informants. This is where, for instance, large contractors adopt H&S laws and standards from developed countries because there are no local ones or because of the Factories Act 2004, the local H&S law is not adequate. It also manifests indigenous businesses as they adopt the National Building Code of 2006 and/or other standards from developed countries because the contractors do not view the local ones as legitimate.

However, there was little evidence of the regulated in Lagos state viewing the regulatory activities (for example, the targeted or selective enforcement of LSSC), as illegitimate with potential for sabotaging the regulatory activities by just adopting a ‘tick box’ attitude (See Section 7.4.2). Similarly, some regulatory activities (such as their requirements, enforcement medium) of the communities noted elsewhere in this chapter were viewed as illegitimate by a lot of the respondents in the NCSRCs, but some were unable to refuse to comply with all the requirements or demands of the communities. This is in addition to the regulatory traps set by some state actors where they do not create adequate awareness of the standards and only sanction people, making huge amounts of money, according to some key informants. Further evidence of legitimacy also occurs where the legal system was viewed as illegitimate because of its bureaucratic nature, inter alia, delayed justice system.

8.5.3.2 Duty to self-regulate or morality: there was plenty of evidence that some CSRCs and NCSRCs self-regulate because it is the right thing to do. The narratives and experiences of these respondents show the strong moral principle at the management level that has inspired good leadership in these organisations, which are viewed as more of a responsibility. However, whether it is religion underpinned remains unclear. The academic and quantity surveyor views that:

‘Not doing what is right in the Nigerian construction industry has caused a lot of harm. People sometimes self-regulate on moral grounds because there is no organisation that wants their workers to die. Because Nigerians are religious people, they may to some extent decide to put some things in place...’

However, there were contending and insightful perspectives by very few NCSRCs and key informants. For example:

The sense of morality in a lot of cases, especially in the construction industry that I’ve seen, comes as a consequence or a by-product of an event. For example, someone falls off all these funny scaffoldings that we create with bamboo. It is only at that point that something like that has happened when that sense of morality creep in [ZP].

‘For our organisation, morality does not influence H&S self-regulation’ [P].

While the above contests morality as a driver of self-regulation, it also acknowledges it, arguing that it is reactive. It tends to be supported by the views of many respondents on *lack of morals in the industry*, which is a barrier to H&S self-

regulation. The lack of morals in the industry centre on: prioritising profit over human lives where in many cases, workers are treated with disdain, suggesting lesser value for the workers; exploitation. When asked about normative motivation as a determinant, respondent ZL contributes to the attitude, ‘exploitation’, alongside underpinning the present discourse thus:

‘Let me tell you the truth, construction companies do not care about people’s lives here in Nigeria. People die every day...I have worked in a company where a worker lost four of his fingers to a machine, they took the guy to the hospital and treated him. The thing continued to generate problems, they sacked the man saying that the man is spending too much money. Some people may have problems like maybe diseases, they will sack them and nobody talks. They believe that if anything happens to a worker because the unemployment rate in Nigeria is too high, someone will come and take over the job. Some workers when they have injuries they hide it from their boss because if their boss finds out that they have an injury, he will presume that they are careless and sack them. So some of them will be sick, yet keep coming to work.

Admitted that morality may not mean the same to everyone, respondent ZL indicates that at least for humanitarian reasons, for the sake of basic human rights and fairness, the welfare of workers should be considered as the right thing to do. With this in mind, one starts to wonder if the Employee Compensation Act (ECA) of 2010 (Section 3.2.2.2) has come into force as at the time the above was happening; if not, at least the Workmen’s Compensation Act Cap. W6 LFN 2004 must have been in place.

8.5.4 Organisational case

Here, the barriers and constraints found in the study centre on: ownership structure and organisational norms. The drivers and motivators found are classed under the themes, ownership structure, and effective and honest leadership.

The barriers and constraints

8.5.4.1 Ownership structure, negative influence

There is evidence that all businesses owned by a combination of Nigerians and foreigners self-regulate while not all the businesses owned only by Nigerians self-regulate. This is based on the profile of the participating companies and accounts of many respondents of and key informants that involvement of foreigners in organisations results in greater management commitment to H&S.

8.5.4.2 Organisational norms

Ownership structure does not only explain this topical issue as organisational norms also count. This can be explained by the attitudes of the management towards H&S, which become norms and possibly corporate culture. The common comments here among Non-SRCs centre on management not recognising H&S thus they do not view it as vital and a responsibility. Very few Key informants suggested that resistance to change in contracting firms might also be a barrier to H&S self-regulation.

Drivers and motivators

8.5.4.3 Ownership structure, positive influence

Just like in the barriers and constraints, ownership structure or size of a firm is also a driver of H&S self-regulation in that just as earlier noted; there was a common view that multinationals self-regulate more than indigenous businesses. So the larger the organisation, the more likely they are to self-regulate. Literature alongside evidence in the current study already points to the availability of resources, preference for larger contractors in the award of large contracts, *inter alia*, as possible explanation (Jimoh 2012; Odediran et al. 2012). Furthermore, many respondents covering the three groups of analysis view that due to the corporate culture of multinationals underpinned by their countries of origin, they will self-regulate.

8.5.4.4 Effective and honest leadership

The favourable attitude towards H&S where the management views H&S as a responsibility resulting in effective leadership then a high level of management commitment explains this theme. This was a common comment among CSRCs and a few NCSRCs. However, comments of a few key informants centre on ‘management commitment to H&S’ existing only in large businesses, large projects and the oil and gas sector, but not in indigenous businesses. The author does not agree with the key informants, as there is overwhelming evidence to the contrary in the research.

8.5.5 Industry case

Here, the issues, norms or activities peculiar to the industry explain the decision-making process in terms of H&S self-regulation. The findings of the study in this topical issue do not only fit into the framework but also show more evidence.

Barriers, constraints and demotivators

8.5.5.1 Absence of institution, control and enforcement

This manifests in two ways. Firstly, few NCSRCs, Non-SRCs and key informants view that regulatory entities, professional institutions such as COREN, CORBON lag behind in their activities; thus, there is no coercive force, control and enforcement of activities. They also view that the lack of employee unions on some sites or the inefficiency of the existing ones to act in a coercive way on businesses, the industry and the government is also a barrier to H&S self-regulation. There is also a lack of sensitisation in the industry. However, few key informants suggest that a lot of factors such as lack of finance, insecurity are to be blamed for the lack of coercive force in the industry, but note that there is a gradual improvement. A respondent captures the points thus:

Another barrier is the failure of the government and professional bodies in sensitising and ensuring that all these professionals in the industry adhere to set standards. Because like now for engineering we have the COREN, NSE, and other bodies, I can't remember any of these bodies that have done so much to sensitise people. Anyone can work as an engineer on site, answer the title 'Engineer', start a building from scratch and finish it. People are not aware that he is not qualified; these people do not know anything about safety even at the design stage. They act with impunity and people are unaware that they are quacks. The professional bodies are not doing what they should do. If they set examples with one or two, create awareness in the society that they are quacks; it will help H&S. To be fair, in some states like Asaba and Lagos where I have projects, the NSE branches are creating awareness in that regard, but more should be done [ZA].

It is vital to remember that COREN regulates and controls the engineering activities and accredits higher institutions that offer the engineering courses in Nigeria while CORBON regulates and controls all activities in building technology including accrediting higher institutions that offer building technology courses.

Secondly, so many NCSRCs, some CSRCs, a couple of Non-SRCs and few key informants demonstrated the lack of institutional responsibility and accountability. In particular, the CSRCs mostly talked about lack of external push in their organisations, which would help them, address some challenges they face. Few then went on to comment on the happenings in the industry that centre on the lack of institutional framework leading to no accountability from smaller businesses and clients, resulting

in H&S being the responsibility of very few in the industry. NCSRCs in agreeing with the CSRCs as per the latter point, also tend to expand the finding that it also results in ignorance among workers. Even when they are aware or knowledgeable, they have no person to whom to complain.

Conversely, although very few key informants acknowledge the institutional impact, they think that the few workers who are educated or who have workers in an environment with high H&S interest know their rights but are demotivated by the institutional issues, thus will not complain as they will not be taken seriously.

8.5.5.2 Dysfunctionality in supply chain activities

Inadequate client involvement: A few of the CSRCs that talked about clients did not believe that their clients hinder H&S; rather from their experiences, clients' lack of awareness and negative attitudes are the major barriers in Non-SRCs and/or NCSRCs. In affirmation, the responses of some key informants mainly centre on clients' level of awareness and exposure (e.g. informed, semi-informed and uninformed) and the types of client. This is where small project clients and/or less informed/exposed clients are very likely to strongly oppose H&S, as against the larger project clients or more exposed clients who are more likely to agree with H&S self-regulation. This suggests the assumption that the larger the project or the more exposed a client is, the more likely the client will self-regulate. While responses of the Non-SRCs and NCSRCs are in agreement with that of the key informants, both groups went on to expand that in some cases (for the NCSRCs) and in most cases (for Non-SRCs) clients are not interested in H&S. The smaller clients are always willing to have small contractors that want to self-regulate *as per* H&S relinquish their positions on projects, allocating the job to another. Conversely, the NCSRCs mostly decried that some clients would shift the H&S responsibility on them. A few in NCSRCs view that a few clients have a high quest for economic gain, but this is emphasised more among the Non-SRCs but for reasons of saving cost or minimising cost.

Incompetence of workforce: this was demonstrated by a few NCSRCs. The NCSRCs are not always buoyant to afford to pay for H&S expertise like the CSRCs, so they pay for what they can afford which may not be the best. This in some cases, may be that they employ H&S experts for the first two years of a project, then use H&S

officers whose level of certification or experience may be low or basic. Comparing the H&S activities of the aforesaid temporarily employed H&S consultants to that of the H&S officers with lower certifications, the few experienced respondents concluded that the activities of the former are better than those of the latter.

Tension between parties in the construction supply chain: this manifests in community-led regulation where the community wants to be part of H&S, or as part of 'local content', the community wants the expertise to be locally sourced or request that they have the funds for H&S. The H&S aspect of the projects is then comprised by the NCSRCs who are unable to resist them, and this may, in turn, result in a problem between the client and the contractor.

Subcontracting: this was also highlighted among NCSRCs and Non-SRCs. While few NCSRCs blame subcontracting for not self-regulating sometimes, some subcontractors who are Non-SRCs appear to view themselves as servants and are not worthy to suggest the terms of self-regulation in some of their projects except when the level of risk is very high. Even if they do, their request for H&S is only considered in high-risk activities. Here the evidence that explains the blame of NCSRCs on subcontracting indicates that during the process of subcontracting to small or micro contractors it appears that the NCSRCs expect a lot from the small or micro contractor which may be beyond their power and skills. Non-SRCs also opine that some projects, because some parts of the jobs are subcontracted to casual contractors who mainly operate in the informal market and know little about H&S, H&S becomes a challenge. This was confirmed by CSRCs while drawing an analogy with their procurement methods, but claim to absorb subcontractors in their H&S self-regulatory programmes as can be seen in Section 8.5.5.8, structure advantage.

Inconsistency in the nature of workforce: Understandably while there were no comments from CSRCs on this point, a few from Non-SRCs talked about it and many in NCSRCs talked about it and the implications. This is understandable *as per* CSRCs in that although they (who are mainly large businesses) employ casual workers, these casual workers have a more regular employment — a more consistent nature of workforce than the NCSRCs. Typically, almost all respondents from NCSRCs and many in Non-SRCs demonstrate the impact of the dominance of casual workers in the

industry on H&S self-regulation. Because the casual workers are independent — the workers may not work for the firms for a long period, they have a different attitude toward work and H&S, the Non-SRCs may not see the need to self-regulate. This is because the casual workers will leave the site with the PPEs and never return, the firms may not reap the benefits of training the casual workers on H&S.

However, due to the above characteristics of the casual workers and many others, the NCSRCs would ‘disseminate in terms of basic H&S self-regulation’, concentrating on their permanent employees. On some occasions, even if NCSRCs want to comply with PPE regulations, other training such as manual handling, and monitor the use of the PPE and progress of the casual workers *as per* the training, they are unable to do so as they fear that they would lose the workers to other sites. NCSRCs are also demotivated by the aforesaid characteristics of casual workers. The accounts of the respondents show that they view this discrimination as legitimate as casual workers have a different attitude towards H&S. A respondent from the NCSRCs captures the point in his statement:

It is only in my core inner circle, my permanent workers, that I insist they wear protective coverings. For me to force casual workers, it may be counterproductive. They may choose not to come. They will say you are forcing them and that it affects their productivity...It is something that you will have to persuade them to do, you cannot force them [Respondent E].

8.5.5.3 Procurement effects

Factors here appear to mostly hinder NCSRCs and Non-SRCs. Although procurement related factors *as per* CSRCs mostly manifest as enablers, giving them the advantage to self-regulate as will be seen in Section 8.5.5.8, structure advantage, their comments on the current theme triangulate the responses of NCSRCs and Non-SRCs.

Compromising and sacrificing H&S in procurement: the process of procurement involves competition; consequently, in contrast to camouflage (Section 7.5.5), in the bid to secure contracts, many Non-SRCs and few NCSRCs compromise or sacrifice H&S. Indeed, Non-SRCs would exclude H&S in the price breakdowns of the bidding document, or just like a very few NCSRCs, they would include H&S in price breakdowns of the bidding documents, but lower the cost of other parts of the project, only to sacrifice H&S after winning the contract for the parts of the project with reduced cost. The understanding among these firms and perhaps the norm in the

industry is that the lowest bidder wins the contract. The inference drawn from the experiences of CSRCs triangulates the experiences of the Non-SRCs and very few NCSRCs. This is in addition to the accounts of a few key informants who are members of the construction supply chain. A key informant talks about it alongside emphasising efforts to fit into the ‘lowest bidder wins the contracts’ formula:

Clearly SMEs contractors, for example, in their estimates while trying to win a contract will as much as possible try to bring down their own cost more than their competitors. Usually, the first thing to be sacrificed will probably be something like H&S. Another way to see it is that if the contractor feels they will lose the contract if they opt to spend a lot on providing a safe work environment, the contractor will avoid it and try to go along the ‘lowest bidder wins the contract’ formula. [ZP].

As a result, NCSRCs who do not compromise H&S standards in their bidding documents may be disadvantaged if the client’s decision is based on the lowest bidder or if the client does not employ the services of expert H&S consultants in evaluating the bidding documents. Below is what one respondent said:

Construction is actually competitive. When you have to price, the clients in the preliminaries make provision for HSE and your PPE but on the other hand because it is a very competitive market, you are competing and we are actually just trying to differentiate ourselves from the market, someone else might quote less and if the client didn’t engage the right consultant to evaluate the bid well, the project goes to the lowest bidder. It will also affect how you implement too because you also have to find a way of cutting down cost as much as possible [P].

The compromise of H&S also manifests due to financial constraints on the contractor, underpinned by the wrong perception that H&S is cost, thus the basics in terms of H&S should be considered. A quantity surveyor in adducing the discourse, shares the opined norm in the industry based on experience, stressing the attitude ‘secondary’:

As a QS because compliance with H&S involves money and we are in charge of anything relating to cost on construction sites or organisations,...we are familiar and are supposed to know much about H&S. We need to incorporate it in the bill of quantity for the project. Because most of the organisations complain about the budgetary constraint as one of the factors why they cannot be 100% compliant with H&S we QS look at what are the main aspects of H&S that we need to put in place and what is the cost implication of it [ZM].

Lastly, a lot of Non-SRC lamented that the pressure to stay in business makes them compromise and/or sacrifice H&S, as they are small organisations, handling mostly small projects, struggling to make profit in business.

Inappropriate procurement system — wrong criteria for awarding contracts: many Non-SRCs and few NCSRCs are largely hindered or demotivated from self-regulating because of the high level of informality in construction, the lowest bidder attitude, religious bias, and political influence. This is where, while clients award the contract to the contractor, because of family values or relationship, the client would request that some parts of the projects activities are handled by his relatives who may come with a different approach or find it difficult or refuse to work according to the contractors' H&S manual. This was mostly emphasised by the Non-SRCs. This was confirmed by few CSRCs with experience in SMEs. In terms of the lowest bidder, as earlier stated, the norm and/or the understanding of awarding contracts to the lowest bidder result in compromising H&S — a wrong criterion for awarding contracts. Furthermore, contracts awarded due to political influence or interest and religious bias also fall into this discourse. This, in some cases, results in contractors resisting regulatory efforts.

Unethical practices in procurement: due to the high level of corruption in the country, during the bidding process for government projects, a lot of money and gifts may have exchanged hands so as to influence the decision-making process of the bid. These decision-influencing incentives can also include public relations gestures. Even, after the contract has been awarded, a lot of parties will still request for some parts of the contract sum as 'commission for the contract'. As a result, the construction businesses will have little to spend on the project and because H&S is more on the soft part of the project, it is compromised. This was strongly stressed by Non-SRCs and NCSRCs. A key informant captures the discourse, alongside highlighting the impact of the types of client and leverage due to size of firm:

Before they award contracts to SMEs, a number of things have changed hands in terms of bribery and settlement. At the end of the day the organisation would have spent much on settlement and it will have a multiplied effect on the project and so you don't expect them to be 100% compliant with H&S and you can't force them. Large companies, on the other hand, working with the government, the government is always willing to make provision

for H&S. For example, let's say you have awarded a contract of 3 million to an SME, if they spent a lot on settlement in order to get the job, and it will take them 200 – 250 thousand naira to comply with H&S, they will tell you that they have spent a lot on settlement, so H&S can wait. This is because for most of these SMEs, their clients are not the government but individuals unlike large companies' [ZM].

In some cases, contracts are awarded to politicians who go ahead to 'sell the contracts' to contractors at a cost far below the adequate contracts sum; consequently, H&S is sacrificed or conducted at a basic level (few NSRCs and Non-SRC).

8.5.5.4 Stakeholders' peculiar attitudes

This relates to the general perceptions in the industry that influence H&S self-regulation (Umeokafor & Isaac 2016). While the attitudes of contractors towards H&S 'convenience in secondary', 'responsibility', 'exploitation in camouflage', are covered in (Sections 7.5.2, 7.5.5, 7.5.6), the attitudes of other stakeholders in the industry are covered here, centred on the workforce, client, community and a state actor.

Supply chain enforcement effects: This appears to mostly occur at the enforcement stage for the CSRCs who mostly experienced addressing issues on the chains of subcontracting that occur in the medium-scale firms that work for them because of contractual issues and clauses between the medium-scale firms and the very small contractors. For few Non-SRC, they do not share the same experiences with few NCSRCs in terms of workers attitude towards compliance as they mostly experienced over-confidence among workers demotivating them from self-regulating in terms of H&S while NCSRCs experiences mostly centre on:

- Workers reliance on the supernatural to protect them.
- Despite their enforcement efforts, the workers fail to inculcate a safety culture.
- The workers valuing money over their H&S.

The experiences of the Non-SRC also go ahead to centre on clients not viewing H&S as vital but as cost thus they stand the chance of losing their jobs if they advise the client or attempt to insist on H&S. According to some respondents, the attitudes of clients and workers are due to lack of awareness and ignorance.

However, there were cases where the attitudes in the industry were not limited to the enforcement stage. Indeed, there is evidence from some NCSRCs, many Non-SRCs, and few key informants and CSRCs that H&S is cost. However, all CSRCs and many NCSRCs that noted this point appear to happily accept the cost having understood the benefits of H&S. This 'H&S as a cost' attitude also informs the decision of clients according to few key informants and NCSRCs. However, a key informant and a NCSRC strongly condemn the above 'H&S as a cost attitude' in that the implications of poor H&S in terms of direct and indirect cost are huge. This is in addition to the disadvantage of not engaging in H&S at procurement in that Non-SRC would only have to bid for contracts where H&S records and referrals are not taken seriously, reducing their chances of engaging in large projects.

Enrichment: The wrong motive for community involvement in H&S was evidenced by many of the respondents that covered the community-led H&S regulation. The experiences of the respondents show that the attitudes of some the communities towards H&S are about enriching themselves under the guise of H&S or ensuring equality for local indigenes under the guise of H&S. There are already quotes in community-led H&S self-regulation (Section 7.4.6) demonstrating the wrong motives of some members of some communities. Conversely, to some indigenous contractors, this attitude of some members of the community provides a platform for them to save some money that should be allocated to H&S, with the aim of maximising profit.

Contractor exploitation: Few CSRCs and NCSRCs and one key informant showed or have experienced some communities exploiting the contractors under the guise of H&S and/or corporate social responsibility. Under community-led self-regulation (Section 7.4.6), there is evidence that communities stipulate the number of local indigenes that the contractor must employ, or the aspect of the project that the contractor will outsource to them, requiring that the contractor employs a CLO. This is irrespective of the existing labour force and expertise in the contracting firm. The position of these communities in the Niger Delta is based on the Nigerian Oil and Gas Industry Content Development Act 2010 (Local Content Act 2010), which stipulates: that preference should be given to Nigerian contractors in the award of contracts in the oil and gas sector; exclusive consideration for Nigerian service companies in the award of services and contracts. While some of these CSRC, multinational large

contractors exploit the request of the community in terms of local content, employing the ‘locals’ as it is cheaper or economical for them, the small contractors are likely to compromise H&S as they do not have the capacity of the larger firms.

However, a respondent from a multinational counters with his experience of positive attitude from a community in a non-oil producing state, for example, South East and Northern part of the Country, where the community support the contractor, showing hospitality through various ways because they view the contractor as contributing to developing their communities. This suggests a geographic difference. Issues of exploitation were also noted by a few of the contractors that have worked in Lagos in that the institutions that oversee H&S and the H&S procedure and policies are unfairly geared towards making money for the government.

Drivers, enablers and motivators

Some factors and/or themes here are consistent with the framework for analysis, for example, coercive forces, quest for leverage (labelled as the competitive pressure in the framework) and higher commitment, manifesting as industry requirement. The findings of the current study that do not fall into the framework then advance the discourse in terms of ‘precautionary and a consequence’, ‘higher commitment’ ‘structure advantage’ and ‘scope and characteristics of operations’.

8.5.5.5 Precautionary and a consequence

The respondents demonstrated that this relates to self-regulating as a consequence of incidents so as to avoid it. This shows a proactive approach (precautionary) and a reactive attitude (a consequence), and consistent with the attitudes, primary (Section 7.5.4) and secondary (Section 7.5.6). Importantly, there was no evidence of moral motives to engage in H&S self-regulation in terms of ‘precautionary’, but there appear to be indications of ‘reactive’ morality as a consequence of incidents. CSRCs and NCSRCs would mostly self-regulate because of precautionary reasons, which appears to be mostly underpinned by a good understanding of the benefits. However, the NCSRCs would in some cases self-regulate as a consequence of accidents or litigation threats from clients, but there were indications of willingness to self-regulate. For example, the comments of a key informant attempts to capture the morality sense, but also stresses ‘a consequence’ as a driver to self-regulation:

'In some construction companies, they self-regulate because they do not want their workers to suffer injuries, as this will cause delays in the work, especially if they are skilled. But, there are some that will not put in safety measures till there is scaffold collapse or someone is seriously injured. This is when they know that a life has been lost, they will then start taking the right measures. They start to sympathise with the family of the victim, and they will now see H&S as the right thing to do. From my experience, I believe nobody wants to see people die, but I think the morality is superficial. If you want to prevent such, it should be before the incidents [ZS].

While respondent ZP exemplifies the lack of morality as a factor, contributing to normative case, he goes ahead to show the reactivity in the morality, which is due to an incident.

8.5.5.6 Coercion

Industry, contractor and tender requirements: CSRCs and NCSRCs with the triangulating views of a few key informants show how they self-regulate because of industry requirement in the oil and gas sector, Lagos state, telecommunication industry, and tendering requirements. This is in addition to the chain-effect in Section 7.4.2. For the CSRC, it mostly occurs as a result of requirements from abroad. These requirements are in most cases a prerequisite for operating in the market and arguably account for industry self-regulation. For many in the industry, insurance is also a prerequisite but the type of client or sector where the project is taking place determines how thoroughly enforced it is. According to a key informant, an insurance practitioner, and very few CSRC and NCSRCs, the H&S records of firms and H&S plans, among many, are required of the businesses as a prerequisite for the insurance. Consequently, to many CSRCs and few NCSRCs, in order to reduce insurance premium, their H&S record will have to be good, thus they have to self-regulate.

Respondent A typifies:

'Insurance is a condition for contracts; it is also not really a condition. If it's oil and gas projects, insurance will have to be there, but for the government jobs, there are no conditions per say. What the government has in place is what they call the Employee Compensation Act...most of the time; it is not a clear requirement. In the government projects, the contract normally specifies that we should pay the workers that are injured or their relative. But the oil companies go into details to make sure that you submit all documents to make sure that all those workers are already insured in case of accident or whatever. And everybody in my company is insured, ... so the more serious the accident, if

the insurance claim is high, then, of course, the company will be expecting a high insurance premium the following year. So they try to make sure that the accidents are within the range, the range that will make them pay a reasonable premium'.

Pressure from workers unions and social actors: Typically, in low skilled roles with high-risk activities, where the workers have an association because the skills are not easy to come by and they have a union, they can force organisations to self-regulate. For example:

'The welders we have on site now, definitely, they will not even listen to you if you are not providing them with the minimum safety equipment like helmets, boots and jackets. They always ask for the minimum because they have their own association. So it is the only trade union within the association, the firm. That is why in some cases, some firms do not allow trade unions to grow within their firms because they know that if they grow, they can always ask for their rights and by asking for their rights they will be looking out for their own safety by asking you to provide for their H&S [E].

In mirroring the thesis in this paragraph, respondent E also draws attention to the potential and importance of workers' associations in improving H&S and a very good understanding of the workers' rights by the associations. Pressure from H&S crusaders also contributes to explaining coercion.

8.5.5.7 Scope and characteristics of operations

Client influence: Confirmed by a few key informants, there was very strong evidence of client driving H&S self-regulation in CSRCs and NCSRCs. However, there appears to be a difference in the role of the clients for CSRCs. For CSRCs the clients are supportive and cooperative, but for the NCSRCs, in addition to being supportive and cooperative, they are also coercive. Although Non-SRC do not self-regulate, they suggested and even viewed that clients are able to drive H&S self-regulation, stressing that the client has high potential to fostering H&S self-regulation because of their position in the construction supply chain. Respondent M typifies the thesis here, especially as during the interview, he recommends client involvement through a client appointed H&S consultant:

'One of the reasons why we engage in H&S is the client. Nestle, oil and gas services have a very high use of safety... government parastatals, like the federal government jobs, CBN and Federal ministry also require safety so much' [L].

While client-led H&S self-regulation shows client influence, it involves the full regulatory process, but here, client influence, does not.

Scale of project and risk: There was evidence to conclude that the larger a project the more likely it is that funds will be allocated to H&S thus H&S self-regulation is more likely. In most cases, these projects are executed based on the size of organisations in that the larger a project, the larger the category of contractor that will execute it. An architect talks about one of the sites that the author visited:

‘Our site that you visited, we follow H&S regulations there because it is a very big site. We have a safety officer; before you enter the site you must be at least 70% covered (kitted). Anything that happens can carry the name of the church so the church has to protect themselves so everything has to be put in place. If it is an individual project, nobody will look for you, but as it is a big institution, before you know it, you will see that, the engineering body will come, safety people will come and many people will come because it is a church.

The above architect in confirming that the size of project determines H&S, goes on to suggest foremost, why the client may want to self-regulate, pointing to the social legitimacy of the client, a point earlier noted in social legitimacy (Section 8.5.1), and that the nature of client and size of projects attracts attention to H&S.

Furthermore, there were indications that the *nature of activities* determines if contractors will self-regulate or if they will adopt basic regulations that may not adequately address the risks involved. For instance, the risks in the oil and gas projects and communities mean that more attention is given to H&S, while small-scale projects or activities where the risk may be viewed as low may not receive the same level of attention. The criteria for assessing the risk remains a concern as health risks and post-occupational ill health may not be obvious at that stage but have significant impact on the health of the workers. For instance, working with asbestos, manual handling which is very common, may be viewed as low risk because they do not result in instant ill health or death, but they affect the workers later in life.

High commitment in some sectors and geographic locations: There is a higher level of coercion, awareness and risk in some sectors such as oil and gas, telecommunication; geographic locations such as Lagos state, Niger Delta areas, resulting in a higher level of commitment to H&S self-regulation. This also creates an

enabling environment for H&S and a positive attitude towards H&S. There was a general consensus among the groups of analysis including Non-SRC in this theme. Thus, if the scope of the projects or activity is outside the above areas, H&S is likely to be overlooked or treated with less regard or seriousness. Furthermore, there is ‘inductive effect’ of the enabling environment in that the level of H&S awareness is higher in the aforesaid sectors, increasing the level of H&S awareness in the community. However, the implications of this can be seen in the attitude, responsibility (Section 7.5.2) in that those construction contractors that are not within the scope noted in this theme have an attitude that H&S self-regulation is a responsibility of only those in the oil and gas sector, telecommunication sector, Lagos state and Niger Delta.

8.5.5.8 Structural advantage

There was very strong evidence, and a consensus among CSRCs, NCSRCs and Non-SRCs that the size of firms determines self-regulation in that large multinational businesses or SMEs (with rare expertise) are more capable of self-regulating. Understandably, key informants did not provide possible explanations for this. In particular, the respondents view that large businesses (with rare expertise): have leverage in the procurement system and financially; are more involved at the design stage as they design and construct, factoring in H&S at all stages, and more able to ensure behavioural safety among workers than other categories of contractors. When communities request that contractors employ a certain percentage of workers from the communities in accordance with the ‘Local Content Act 2010’ requirements, these, including large contractors, are able to do that and still maintain high H&S standards, unlike smaller firms who may not have the advantage. Above all, they are able to resist corruption, impose their standards on their clients. This is related to power relationship that will be discussed later. Some CSRCs claim that they absorb subcontractors in their H&S programmes including them in H&S training, site inductions and welfare. The views of the respondents below evidence the thesis in this paragraph:

Large construction companies will tell you the conditions they expect if you want them to work for you. For instance, they will include H&S cost in the bill of contract, getting the client to pay for it, but the SMEs do not have that advantage. If the bills the SMEs give for any project are a little bit high or is unfair, the client will say it is too much and would

prefer instead to spend such an amount on Julius Berger or Arab contractors (multinational contractors). So for the SMEs to win the job, they will need to cut some things to the extent that even the amount of money to do the job is not enough, not to talk about H&S [F].

Respondent A talks about how there was community pressure to employ 40% of the workforce from the community to fulfil the Local Content Act 2010 requirement. The contractor has gone ahead to assess the workers based on their claimed competence and employ those that excel in the exams or assessment, providing further training. They however offer other positions to others, providing training as well. *According to the respondent, 'It is economical for us because if we have to move some other person from another location, the person will leave his family and everything, unless the person is a specialist we are going to be paying a lot. But if we are able to raise these guys locally, it is more economical for the company, so we understand that'.* He goes on to explain how they induct the employees of subcontractors, and even include them in H&S training.

Respondent F was probed, and he exemplified how the large businesses factor in H&S and get the client to pay for it. This advantage that large contractors have is also demonstrated in a key informant's quote on 'unethical practices in procurement'.

8.5.6 Power relationship

Manifesting in both positive and negative means, power relationship is conceptualised here as the resistance or influence on others or activities (including regulatory activities) *as per* H&S self-regulation by a group or organisation due to its powers (e.g. financial/political power). The evidence from the research fits into the framework of analysis but also expands this explanation by adding power resistance.

Positive influence

8.5.6.1 Resistance power: here, CSRCs will weigh the projects, the level of expertise and equipment required for the job, and their political power knowing that they have an upper hand in the industry, they uphold their standards including H&S. They are assured that the client does not have any choice as they have the expertise; financial power and technology which are limited to a few in the industry. This may explain the 'structure advantage' in industry case. So any client approaching them is well aware of what to expect. In other words, CSRCs are able to resist pressure from the community or client to compromise H&S standards. Non-SRCs and NCSRCs and key

informants expressed the view that this mostly occurs in large construction firms and in a few SMEs who have strong political influence.

Negative influence

With the strong political and social influences, this is in contrast to the ‘positive influence’, thus barriers.

8.5.6.2 Resisting regulatory efforts: political influence, which is already covered in political environment (Section 8.4.3), is expanded here in that the regulated (Non-SRCs and NCSRCs) exploit their political or social powers so as to resist regulatory activities. This is where the regulated weighs their political or social influence and the possibility of influencing or resisting regulatory efforts. Hence, the regulatory authorities whose activities cut across the industry are unable to enforce regulatory standards. While this was consistent with the accounts of some key informants, they did not relate it to any category of contractors.

8.5.6.3 Financial influence: the money culture in the social environment appears to reflect here in that the general belief that ‘people pay their way through everything’ manifests in the form of corruption. Understandably, only a few key informants among the consultants, some NCSRCs and Non-SRCs narrated how they are able to have their ways with regulatory authorities and communities by paying them. For example, respondent D shows how corruption informs financial influence towards not self-regulating:

The major problem in implementation is that the people that are supposed to enforce it, once they come to site to check if some of these things are in place, the contractor will take them to one corner, arrange a fat envelope, squeeze it into their hands and they will clear them that everything is ok on the site and go. When the contractor knows that he can buy his way out, why will he self-regulate?

As respondent D notes, the regulated are well aware of their ability to ‘settle’ the regulators, thus, they will not self-regulate. He also suggests that the regulatory activities may be counterproductive in that they will become an avenue for enriching some people. Consequently, as noted elsewhere in this chapter, some respondents conclude that regulatory activities are not legitimate.

8.5.7 Regulatory case

This topical issue covers regulatory factors that are: counterproductive to H&S self-regulation, for example, bias in regulation and control, ineffective regulatory regime; enablers and drivers of H&S self-regulation, for example, the threat of regulation. They fit into the framework of analysis and go on to uncover factors outside the framework. The impact of the state actors is strongly emphasised more than the impact of non-state actors.

Barriers, constraints and demotivators

8.5.7.1 Bias in regulation and control: this occurs at both the *internal organisational level* where there is not state involvement and at *state actor level*. At *internal organisational level*, the process of self-regulation involving some regulations, programmes and standards such as PPE, H&S surveillance standards, involves only permanent or more regular workers, excluding casual workers. As earlier stated, this is because of the attitudes of the casual workers and difficulty in regulating their activities, and the perceived counterproductive implications of enforcing the standards on casual workers because of their mode of employment of the workers. There is a difference in the experiences and accounts of CSRCs, NCSRCs and Non-SRCs. Typically, there is no account of the above happening in CSRCs, which may be explained by structure advantage (Section 8.5.5.8). On the other hand, while the excuses of Non-SRCs for not self-regulating were mainly based on ‘casual worker attitude’, NCSRCs were mostly biased in regulation and control because of the aforesaid excuses.

At *state actor level* (e.g. LSSC, Ministry of environment, COREN, NESREA), bias in regulation and control results in selective enforcement, monitoring and control where the following happen:

- Only formal construction sites and companies, and new construction companies are monitored and controlled (Key informants and Non-SRC).
- In Lagos state, large construction companies, sites or premises are enforced because of the prospects of heavy fines to balance books and personal pockets. (Key informants and NCSRC).
- Sanctions on firms with influential owners and/or larger construction companies are disproportionate to their breach of standards or even overlooked, as against

what would obtain in SMEs with less influential persons (Key informants, NCSRC and CSRC).

According to these respondents, the above can be explained by the social and political environments that produce contextual factors such as political influence in the society, bribery and corruption, and insecurity of enforcement officers (Figure 8.1). As a result, few construction contractors and many H&S consultants are demotivated in terms of the regulation of H&S. The accounts of a key informant and an NCSRC depict the two points above and go on to offer possible explanations to the discourse:

LSSC goes round to sites to check whether workers and companies are adhering to H&S. I will give the enforcement 20% because they only go to high profile sites. They don't go to low-profile sites believing that those ones are not going to do it and there is nothing to sanction, so they spend most of their energy on what I would call high-profile sites — sites run by companies that they can sanction, where and get heavy fines. That is what I see. Even if they visit low-profile sites, when negotiating, they quote an amount that is very high for the client, who will dismiss them [Respondent O].

Another put it this way:

Penalties should be given to people if they do not adhere to safety rules and regulations regardless of who they are and the size of their companies...with the current issue of corruption in the country, people bypass such penalties. I know it is common practice. The regulatory body will come in and tell you to stop work and you tell them not to worry that you will see their "Oga". Seeing the boss means that monetary value will be placed in that statement and when they do that it means that they would continue work without anybody having issues with them [ZS].

Both respondents, ZS and O, mirror the bias in regulation and control, they go ahead to suggest some wrong motives for regulation of H&S and show the strong influence of corruption. However, the state actors can argue that the targeted enforcement is a regulatory strategy where the aim is to set examples with a few. Additionally, evidence from respondent O shows an understanding of the position of LSSC in that the lack of manpower and the need to make enough revenue to meet own budget, as they are not government funded, are possible explanations for the targeted enforcement. However, the activities of the state actors are counterproductive as there are indications that contractors from smaller sites or the informal sector take advantage of the neglect and continue with poor H&S standards.

Furthermore, the goal-based approach that occurs in Lagos state noted in enforced self-regulation also contributes to explaining the bias in regulation and control at internal organisational level. This is because they may be creating an enabling environment for the attitude towards H&S self-regulation, responsibility.

8.5.7.2 Ineffective regulatory regime: this relates to H&S regulatory instruments, enforcement and monitoring processes. There are three subthemes here: inability to effectively regulate, poor regulation of H&S, lack of adequate H&S laws.

State actors: Inability to effectively regulate: This is the inability of the state actors (e.g. LSSC, COREN, NESREA, and Ministry of Environment) to effectively carry out their regulatory activities, for example, inspection, monitoring compliance and enforcing sanctions. Very few Non-SRCs and NCSRCs who shared their experiences noted that engineering practices, one of the responsibilities of COREN, and the activities of low-skilled workers are not adequately regulated resulting in a lot of quacks in the industry, especially in the informal sector. As a result, the impact of external actors on H&S self-regulation is reduced or inadequate. This, in many cases, is because of political influence, social status, insecurity of enforcement officers, poor H&S laws, and undeveloped regulatory approach. Albeit, understandably, not covered by CSRCs, there is compelling supportive evidence for this subtheme from the accounts of key informants. A key informant with regulatory responsibilities narrates an experience:

'..Sometimes, when some politicians are on construction sites, they will not allow...inspections to take place. We are asked not to enter the site because a top-ranking politician owns the site and if you dare to force yourself they will beat you up. As a result, a lot of contractors now see us as powerless. They think they can just get politicians in higher places to influence or stop our work. And you know, in this country, if you try to stand in their way, you may lose your job or even be killed' [Respondent ZH].

The account of Respondent ZH in demonstrating political influence also demonstrates the level of insecurity that inspectors encounter and how their regulatory activities are affected. This is likely applicable to non-state actors as Umeokafor et al. (2014c) note. Contractors also experience insecurity in community-led regulation. Many contractors also narrated how they were unable to fully self-regulate or how their regulatory processes were affected (for more details, see Section 8.5.9).

Poor regulation of H&S: there was a consensus among CSRCs, Non-SRCs, NCSRCs and key informants that as a result of inadequate enforcement and monitoring of H&S laws, many construction contractors do not self-regulate. This appears to be mostly emphasised by almost all the respondents through one way or the other. For instance:

‘There are no safety inspectors that come here to insist that we do H&S. If they normally come and stop work here, the client who does not want to pay for H&S will pay the fine and then provide for H&S, only such will make them pay. If there is a penalty regime, organisations will comply with H&S laws’ [U]

‘Since I started working, I have not seen any organisation that said that they are in charge of safety that comes to the site to inspect safety except on this project (name of project withheld) [Respondent ZL]

From the above, while there are candid reports of non-compliance due to inadequate regulatory efforts, respondent U would welcome sanctions for non-compliance so as to get the client committed to H&S. This does not only suggest frustration but also suggests that the respondent may be willing to co-operate with the regulators.

Lack of adequate H&S laws: while some CSRCs and NCSRCs noted the inadequate H&S laws, they appear to ‘get on with it’ in that they develop and or adopt standards and procedures that are contextualised to Nigeria. However, this appears to be a barrier to many Non-SRC and even few NCSRC; a point supported by some key informants who suggest that it is a hindrance to enforcing H&S. This may be explained by the time and resources SMEs will spend or they spend on employing the services of H&S consultants to develop H&S procedures and standards and even in enforcing them. A key informant’s comment:

‘Everything is centred on the government setting up policies. The government has to do a lot of things like creating an appropriate H&S legislation governing construction work. Enforcement of H&S policies and procedures by the government and then provision of H&S laws particularly local version; the SMEs do not find it easy’ [ZM]

While the QS above indicates that there is inadequate H&S law in Nigeria alongside lack of adequate governmental involvement, the respondent also understands the need for a local version of H&S laws in Nigeria as it would benefit SMEs which are the majority in the industry and the heart of the economy. Respondent L goes on to suggest that inadequate H&S laws results in ignoring H&S:

‘Where I work, there are mechanical consultants, electrical consultants, clerk of works, project managers, architects, about seven different consultants, but there is no safety consultant. So safety cannot be at its best because it is contractors doing it. So, they, the clients, ignore the safety part. Because there is no law requiring H&S consultants from the clients, there are no safety consultants from the client, so it is up to the contractor’.

8.5.7.3 Self-regulation effects: The institutional environment that explains the dysfunctional and fragmented regulatory regimes in Nigeria’s construction industry resulting in various self-regulatory approaches was found to be counterproductive to H&S regulation. There are indications and evidence that the dysfunctional and fragmented regulatory regimes result in: inconsistent and complex regulatory regimes; less powerful non-state actors; excessive external involvement and actors.

Inconsistent and complex regulatory regimes: there are indications that the different regulatory regimes which mean that the self-regulatory instruments, processes, and expertise constantly change, are not favourable to some NCSRCs because they increase costs for them. Unlike CSRCs who appear to have the expertise, sometimes NCSRCs have to outsource H&S consultancy: that means spending more money and perhaps compromising standards. Further, as stated in enforced H&S regulation (Section 7.4.2) some contractors may set very high H&S goals and objectives, but fail to achieve them. An H&S consultant, ZR recounts:

‘There is need of a particular legislation so that people will not adopt any standards. If there is local legislation or requirement, people will say ‘ ok, they are following say the Nigerian Construction Act that has a particular provision of what to do, just an example! This is better rather than having people develop safety manuals and then tire it around what they can work; people will not make it ambiguous so that they do not shoot themselves on the foot’.

Respondent ZR in emphasising the need for local H&S laws and standards goes on to emphasise the need for consistency and standardisation of H&S regimes and requirements. When respondent ZR was probed, the respondent confirmed from experience that ‘contractors bite more than they chew’ and end up compromising the standards later, whereas clients believe that the standard for his work is very high.

Less powerful non-state actors: From the experiences of few key informants, H&S consultants are not so powerful in enforcing H&S on behalf of the clients or when the

H&S process is H&S crusader-led. This is because client-led and H&S crusader-led H&S self-regulation may not involve legal proceedings. This is supported by the experiences of two CSRCs when they worked in SMEs.

Excessive external involvement and actors: There are indications that some respondents in NCSRC are not happy with the extent of external involvement in industry H&S self-regulation. While they agree that there should be external involvement, they, however, suggest that more controls by contractors would be beneficial. Furthermore, the *plentiful actors in H&S self-regulation* in Lagos state result in bureaucracy in the regulatory process, unclear and inconsistent regulatory process, leaving the regulated dissatisfied or viewing the regulatory process as unfair. For some contractors, this increases the cost of H&S and creates uncertainty in business. An H&S manager recounts his experience:

‘Third-party organisations: If you give the certification to a third party. If they come, you need to book a hotel for them. You need to take care of their expenses for the day or the number of the nights they will spend in your state because these persons may not be in your state. You also need to pay their consultancy fee’ [G].

Another respondent’s view reinforces the above:

‘Here, one reason that we do not self-regulate is the process, duration, time and resources that are involved. Sometimes they need to send the staff for constant training and invite third-party organisations to come to inspect them. Things like that really affect the organisation. If you have a project in places like Lagos, the protocol there is so much, the process is so unclear’ [N].

8.5.7.4 Low threat of regulation: This manifests where state actors (LSSC, NESREA, Ministry of Environment, COREN) are involved. Considering the emphasis on the lack of adequate enforcement of construction H&S, the ability of contractors to ‘pay their way through’, and the bias in regulation and control as per the state, there are indications that the regulatory threat is low. In other words, the contractors are well aware that they will not be prosecuted or caught up in the regulatory processes of state actors, so they will not self-regulate. The secondary factors here are from social and institutional environments.

Drivers

8.5.7.5 Threat of regulation: despite the dysfunctional and fragmented H&S regulatory regime in Nigeria's construction industry, the regulatory efforts of state actors and non-state actors were found to result in regulatory threats thus driving H&S. This is where the regulated is likely to be 'caught up' in the regulatory process of non-state or state actors.

Threat of Regulation from non-state actors: the non-state actors found to contribute to driving H&S are the communities, private and corporate clients, the oil and gas industry, H&S crusaders, workers' union, main contractors. The responses, mostly from NCSRC and key informants centre on:

- Client prequalification of contractors *as per* H&S (NCSRC).
- Clients and communities' requirements during construction (NCSRC & key informants)
- Non-state actors involvement in H&S (NCSRC and key informants)
- Inspection and certification of equipment (PREMOB) and H&S procedures (CSRC, NCSRC)
- H&S audit and inspections by clients and oil and gas before final contract decisions are made (CSRC, NCSRC and key informants).
- Fear of client litigations for delays in completion of projects (NCSRC)
- Company policy of multinationals (CSRC).

Because contractors are aware that their H&S record, including referrals from clients, and the outcome of client inspection and audit before the final decision on the award of contracts are made or even before they can bid for contracts, count towards their getting the next job, some of them will self-regulate.

Threat of regulation from state actors: there are indications that the involvement of COREN, LSSC, NESREA, Ministry of environment, Fire Service Commission, and Lagos State Building Control Agency has improved H&S in Nigeria. Very few CSRCs mention the influence of NESREA, Fire Service Commission, and Ministry of environment on compliance with basic H&S regulations and standards. However, the impact of the aforesaid state actors appears not to be the main driver in that the aforesaid CSRCs claim that the requirements of the state actors were already current requirements (company policy or international standards) in their companies. They

went on to suggest or state that in most cases, their standards are higher than those of the state actors. Nonetheless, the NCSRCs appear to have a different experience in that very few acknowledged the impact of state actors on H&S compliance in their organisations. However, it was unclear the extent of impact that the state actors have. Be that as it may, the interactive collaborative monitoring strategy that tends to obtain in Lagos state is arguably a regulatory effort that may contribute to H&S self-regulation in the state. A key informant comments:

'For a particular project to be done, contractors would work 'hand in hand' with these bodies in Lagos. Meaning that they should come at inception, execution and also the finishing of the project and not just wait for the finishing of the project. So, they would have been monitoring your safety conduct on site and ensure that it is in line with general safety, their own safety or an international safety standard' [ZS].

While the resources of the state actors in Lagos state may not be up to the expected level of inspection, as a few key informants suggest, respondent ZS's statement above points to the possibility of regulatory threat which will make contractors comply. However, considering all happenings in the: social environment of Nigeria such as bribery and corruption, influence of social status; political environment, for example, power relationship; institutional environment such as bias in regulation and control, ineffective regulatory regimes; the efficacy of the regulatory threat may be low. However, it is still logical, at least theoretically and according to a few respondents that the presence of state actors would normally make a difference in H&S. A key informant affirms:

'From observation, it has been seen that in Lagos, the level of safety has improved around construction areas such that basic safety equipment is provided because they know that it is a legislative rule to have it before they work. And also processes in genuine approvals from the various authorities in the jurisdiction have helped in ensuring that these laws are adhered to' [ZS].

However, it is unclear if the improvement is in terms of H&S performance or in terms of superficial H&S awareness in some geographic locations. This is because as much as the awareness is improving, making construction firms put up signs to show their level of commitment to H&S at the entrance of construction sites and companies, there is evidence that despite these signs, compliance with basic H&S regulations is low or even zero. In addition to the points made on the attitudes of contractors in

Section 7.5.5, camouflage, a key informants comments, and this is supported by the observations of the author while collecting data:

Some contractors put up signs that people must not enter the site without PPE but in reality, it is not so. In one site I visited, somebody was offloading reinforcements from a truck but was not wearing gloves or boots. He was, in fact, walking bare footed. And this was the same contractor that stated outside the gate that you must not enter the site without PPE. You see, most indigenous companies here have not understood [ZQ]

There was little emphasis and demonstration of the threat of regulation by state actors driving H&S self-regulation as non-state actors, which was found to mainly drive H&S, especially community efforts and oil and gas efforts.

8.5.8 Business case

The findings of this study are not in agreement with the framework of analysis (Umeokafor & Isaac 2015a: economic case) in terms of the calculated motivation. This is discussed in Section 10.4.1. Nonetheless, the findings of the current study go on to mainly focus on the actions that are highly economically or profit motivated, that are more in line with the business case (Giuliano & Linder 2013; King & Lenox 2001).

Barriers and constraints

The factors here show how the construction contractors or the industry prioritise economic benefits over H&S.

8.5.8.1 Quest for economic gain

The poor understanding of H&S, for instance, that H&S is cost, and the poor regulation of H&S contributes to explaining this theme. The quest for economic gain manifests among clients, Non-SRC, and NCSRC.

Client economic gain: according to Non-SRCs, many of their clients do not want to spend on H&S because they view it as cost and unnecessary. This is despite the huge cost of the projects and the basic H&S requirements. As most of these Non-SRCs are small or micro and do not have the capacity to withstand the pressure from the client, as they may lose the job, they do not have any option but to take up the job. A respondent illustrates:

‘Most times the engineer will like to do what is right, at least to provide minimal safety measures but the owners of the work do not care. They are just like slave drivers; their

only concern is for the work to be done at the least possible cost even if they need not pay the workers. You might tell them that you need boots, hand gloves, helmets; they won't buy them. Most of these clients are wealthy and willing to spend a lot on the projects, but just want to save money when it comes to H&S [E].

Contractor economic gain: while there may be many reasons as to why contractors will want to maximise profit, for instance, to cover the cost of contract lobbying or personal gain, there is strong evidence that in some cases, even after the client has provided funds for H&S, contractors will not engage in H&S so as to maximise profit. Understandably, as an enterprise, a contractor should profit, but that should not be to the detriment of the H&S of people. There is no evidence to associate the above to CSRCs, but only to Non-SRCs and NCSRCs. Two respondents recount their experiences:

'When contractors see that the client does not care about safety, nobody is enforcing safety, that money that has been claimed in the contract for safety can be diverted, just to increase their profit ' [ZL].

I can remember some time ago when we had activities that would need to be done via mechanised means, but because it was cheaper to do them manually, and the client representatives were not going to be around, we had to do it manually. Now, some people from the communities were already 'settled', you know what I mean, so we were sure that nobody was going to report us to the client [N].

In the above statement of respondent N, the construction contractor has weighed: the likelihood that he will be caught (which is low as he has an agreement with the community), the cost of their company self-regulating, the risk of ignoring the community and then decides not to fully self-regulate.

8.5.8.2 Striving to survive in business

SMEs are faced with the choices of losing a contract or not self-regulating or reducing the quality of H&S. The common views here between few NCSRCs and many Non-SRCs are that in a bid stay in business or win contracts, few medium-scale firms and many small and micro businesses:

- Do not enforce some H&S standards such as PPE regulations, proper lifting techniques, on casual workers because: they are temporary workers; they may leave their sites or companies for another company because they may not want to

comply with the requirements; they may have sold off or retained their PPE for wrongly perceived better reasons such as attending occasions.

- Agree to engage in H&S without the client paying for it or addressing it in the contract sum.
- Overlook or ‘water down’ the H&S self-regulatory process just to stay in business or retain a contract.

There was agreement in the views of the key informants and the respondents from the NCSRC on all the points above except on the issue of casual workers. Typically, while so many in the NCSRC group claim that they self-regulate, the attitudes of casual workers do not help matters. Conversely, very few key informants disagree; they would rather blame the businesses for not permanently employing casual workers or for not treating them like permanent workers. They go on to blame the supposed attitude of the casual workers on some PPE that are not designed for Nigeria or policies and standards that are impractical. While these key informants may be right on some of the above, the issues of small, micro and medium businesses employing all that work for them is not possible in the construction industry.

Drivers and motivators

8.5.8.3 Active economic motivation

While some construction contractors will not self-regulate to maximise profits, there are some that have a good understanding of the economic benefits of H&S in that the direct and indirect costs of incidents increase project expenditure that, in turn, reduces the revenue. These are outlined under the subthemes below.

Increased productivity: many CSRCs and some NCSRCs demonstrate that they self-regulate to increase productivity in that if there are incidents on site, the project duration may increase, in turn, increasing project cost and even affecting the image of the contractor. This is because the client may take legal actions; the families of the victims and the community, especially in Niger Delta, may also put claims. While one key informant was highly critical of the quest to increase productivity among contractors in that it may result to overworking the workers, a few other key informants supported the position of the CSRCs and NCSRCs.

Status preservation: this is not independent of contractor image discussed in social legitimacy, Section 8.5.1. This occurs more from an industry legitimacy perspective and appears to be common among NCSRCs. The contractors need to maintain the image and status in the industry so as to maintain the flow of contracts in the firms, a way of staying in business, a way to try to get to the level of CSRCs who have structure advantage. There was, however, little evidence of the economic impact of punitive measures from state actors driving H&S and strong indications of damage claims by clients, communities and main contractors driving H&S.

8.5.8.4 Proactive economic motivation

This is where the economic drivers and/or motivators are for prospective projects but may be informed by on-going and/or previous projects so as to secure subsequent projects. Overall, a theoretical explanation is that the regulated will weigh the economic implications of not self-regulating *as per* H&S, with little consideration of the cost of self-regulation then overlooking the low regulatory threats, then self-regulate. It is more about self-regulation as an investment.

Leverage: As a result of competitive pressure, organisations take steps that will give them an advantage over others in the market and in prospective projects. This is where contractors:

- Get referrals from clients for good H&S records.
- Get certified as per H&S.
- Promote their images through websites where they present evidence of H&S records, or certificates, or referrals from clients.
- Maintain H&S records.

The main point here is that promoting the image of the organisation makes the organisation be industry legitimate with the overall goal of economic benefits. With this, the contractors have an advantage over others in securing large projects. This is, of course, for projects where H&S is considered as one of the criteria at prequalification or bidding. The recent increase in H&S attention is making H&S credibility more attractive to contractors. While this does not guarantee good H&S standards, rather suggests a tendency of a ‘tick box’ attitude for some businesses, it raises optimism on H&S in the industry. Although this was not so common among CSRCs, it was more emphasised among NCSRCs and affirmed by some H&S

consultants, key informants. For example, a CEO and Civil Engineer, from an NCSRC talks about this:

Some corporate clients also look at the clients you have rendered service to. If they know that the particular organisation takes H&S seriously, they still give us an open door. When your HSE process is certified it gives you more credibility in the market. Although it is too expensive, we are working towards certification.

Further accounts from NCSRCs contribute to the discourse:

Business is competition, so whatever edge you have you use them. Some people comply, nobody is checking them but they judge themselves. It is an advantage for them, for image and all of them. If you make your mark, people will be willing to engage you and when you put your price forward, they will be willing to pay you. That is what the large organisations do. The medium sized and young companies can't do that. They have to do the work but if they are willing to loose part of their profit, they can do it to build a good image for themselves, but they will benefit from it in due course. [Respondent O]

8.5.9 Ability to self-regulate

Drawing on the position of Winter and May (2001), it can be argued that the ability to self-regulate is a secondary or indirect explanation for self-regulation. However, some elements in the current framework (normative judgment case, economic and calculated case, social pressure, and social legitimacy) can only occur if the organisation has the ability to self-regulate, so the willingness to self-regulate is not enough (c.f. Winter & May 2001: ability to comply) likewise regulatory efforts. For instance, without adequate knowledge of how to self-regulate and/or financial capacity, contractors are unable to self-regulate. Consequently, as the ability to self-regulate is crucial to the aforementioned elements of the framework, it is considered here as a full explanation for self-regulation (c.f. Winter & May: ability to comply). Further, the theme 'implementation capacity' (in Section 8.5.9.2), where the regulated have the capacity to comply but it is compromised or sabotaged, affecting the ability of contractors makes a case for addressing ability to self-regulate as a primary explanation for self-regulation in Nigeria. Lastly, this explanation for H&S self-regulation factors in the joint efforts of various determinants in different themes or subthemes that have the same impact but are not related so as to advance the understanding of self-regulation.

Barriers, constraints and demotivators

8.5.9.1 Lack of financial capacity

Supported by a few key informants, very few CSRCs, many Non-SRCs and NCSRCs demonstrated, opined and/or suggested financial constraints, which negatively affect their capacity to self-regulate H&S. For the very few CSRCs, their responses centre on the high cost of self-regulation due to the multiple actors in H&S regulation in the industry. Typically, the cost of having third parties certify their equipment, H&S programmes, offer training based on various regulatory actors' requirement contribute to increasing H&S cost; this was also reported by many NCSRCs. However, this appears not to stop the CSRCs from self-regulating.

The limited budget was the main point reported by many Non-SRCs and NCSRCs because clients do not allocate enough or any funds to H&S in contract documents. Budgetary constraints are the reason why construction consultants compromise H&S at the design stage, leaving contractors to adopt basic H&S secondary legislation such as the PPE regulations. While this may not be the fault of contractors, the quest of some contractors such as SMEs to maximise profits call into question the limited budgetary constraint point. This is because some key informants including consultants view that many SMEs use cost as an excuse after they may have compromising H&S cost in the contract documents so as to bid with a lower quotation, facilitating their bid. Other key possible explanations for the low financial capacity are:

- The high cost of establishing an H&S management system for the first time.
- The unethical practices involved in securing contracts such as bribery, spending a lot on public relations and paying commission to various influential parties after the mobilisation fee is paid.

8.5.9.2 Implementation capacity

This is where some contractors have the capacity to self-regulate but it is compromised or sabotaged or undermined internally in the organisation.

Dissension within the organisation: This was demonstrated or covered by so many in the NCSRCs. This centres on: religious interest versus best practice; personal interest versus best practice; company interest versus workers' interest; morality versus profiteering. As a result of these differences in interests and objectives, decisions on

H&S are challenging and constrained, especially in SMEs. The account of a Civil Engineer and Project manager who has worked as a safety officer in a multinational construction company captures company interest versus H&S or workers' interest:

'In my experience, like I told you, I worked as a safety officer in one of the construction sites. My manager will be fighting me when I ask him to do what is right for the workers. The thing wanted to cost my job. He was asking me if I was working for the workers or for the company because they see it as an avenue to save money and make money.'

Another respondent from a multinational invited by an indigenous company to set up an H&S system, narrates how the personal interest of an employee over the H&S resulted in internal company politics making the company withdraw from setting up an H&S management system. The words of the respondent:

'I remember there was a company, that... asked me ... to set up the H&S system in their company for them. They had a guy who doubles as safety and security manager, but he knows next to nothing on H&S but they have put him there and now this woman or the commercial director has observed that things were not running well. And she came to our organisation and asked me to help. I introduced a proposal to her and when she submitted it, the person there who doubles as safety and security manager felt threatened, he was not comfortable with it or had a personal interest. Instead of him deciding to key himself into it and get himself to learn, he became hostile and started producing information to the MD that he can do it, that this is not necessary...at the end, I just had to back out...'

Sabotage: Here the capacity of organisations to self-regulate is compromised or sabotaged internally. There is strong evidence that some large multinationals would want to self-regulate, but Nigerians in the management of these firms sabotage the efforts of the large contractors or discourage them from adopting high standards. The views of a key informant show how:

A company comes into Nigeria and says that they want to do H&S based on their standard, adopt policies of their parent companies abroad here. Then a Nigerian that has been chosen as a GM or the director of operations now begins to cut cost to ensure that some things are not done. When this happens you can't blame the foreign company. The Nigerians who take the money to make these things happen take short cuts. You won't know what they have really done until accidents happen. When you investigate what happened, you now find out that money was allocated to things, but either the Nigerians go and buy substandard equipment or they don't even buy the equipment at all' [ZO].

Driver and motivators

8.5.9.3 The **financial and structural advantage** that CSRCs, including large contractors, have, increase their ability to self-regulate (Section 8.5.5.8). For example, because large contractors have the financial capacity, giving them structure advantage, they are able to employ and train local indigenes (as workers), among the requirements of the communities in which the contractors operate.

8.6 INTERACTION BETWEEN EXPLANATIONS AND OTHER REMARKS

In addition to the ability to self-regulate, there are other explanations that are related which may offer a deeper understanding of the discourse. Typically, the ability to self-regulate factors in determinants that are subject to the financial and implementation capacities of contractors to self-regulate, and the indirect determinants (e.g. money culture and social status) to manifest in explanations such as power relationship and regulatory case. Money culture and social status are from the institutional and social environment. Similarly, social pressure that manifests as coercive forces can result in the threat of regulation. Furthermore, financial constraints result in compromise in industry case. Because of the structure advantage of some contractors in industry case, they are able to resist pressure to compromise standards, insisting on high standards for all clients — power relationship.

While there is evidence of contextual influences from the cultural, institutional, political, social environments, further insight is offered to the discourse where there is little or no evidence of contextual factors in the above environments directly influencing some direct determinants of construction H&S self-regulation (Figure 8.1). The emerging themes of these direct factors are not limited to the threat of regulation, the quest for economic gain, survival in business, proactive economic motivation, active economic motivation, contractor image, non-coercive, financial capacity, financial and structural advantage (see Figure 8.1 for more details). The subthemes/evidence in these themes can be found in Table 8.1.

Drawing on the description of contextual factors by Umeokafor and Windapo (2016) in Section 8.4 where contextual factors are dynamic factors in the external environments that influence, among many, the activities of organisations, it is possible that some change in conditions may result in a different outcome. For

example, a change in government policy, which encourages involvement in H&S by providing incentives such as reduction in taxes, can result in political or economic contextual influence on the direct factors of construction H&S self-regulation in Figure 8.1.

There are consistent patterns significant with the groups of analysis, which offer further insight into the discourse. Typically, while the CSRCs and NCSRCs are of different sizes, their scope of operation tends to be consistent. This is where they mainly work in the oil and gas sector and/or work for large and multinational clients and/or in Niger Delta of Lagos. This scope of operation gives the CSRCs and NCSRCs advantage in the industry, motivating them to continue to self-regulate. However, the advantage of NCSRCs appears to be in the lines of leverage and not in terms of power resistance and structure advantage as CSRCs have. Furthermore, there are indications that because NCSRCs understand and have benefited from H&S, they are not likely to stop self-regulating. This questions the over-reliance on external invention from the government in improving H&S in Nigeria's construction industry. However, this is not to be misconstrued as viewing governmental involvement in H&S as inconsequential as will be seen in the next chapter.

8.7 SUMMARY

The second facet of the study is presented in this chapter, which explored the determinants of construction H&S self-regulation in Nigeria, and how they occur. Using a framework for analysing the determinants of construction H&S self-regulation through inductive and deductive means, there is evidence of indirect factors, which are mostly from the environment. These can be explained by the institutional environment (dysfunctional and fragmented H&S regulatory environment), cultural environment (community influence, ethnicity) political environment (political institution and government structure) and social environment. These, result in key indirect factors not limited to religion, insecurity, money culture and social status. The direct determinants are labelled under themes not limited to: client legitimacy, coercive and non-coercive means, structure advantage, the scope of operation, and absence of institution, control and enforcement. There is evidence in the study that contractors also self-regulate in terms of H&S because they have the

power to resist corruption, clients' unhealthy requests and pressure from the community to compromise H&S. However, there are some that have the financial power to resist regulatory efforts. Despite the dysfunctional H&S regulatory environment of Nigeria's construction industry, there is still a threat of regulation from state actors and non-state actors where the impact of the non-state actors is higher and more highlighted than that of state actors. However, it was found that contractors are constrained or hindered from self-regulating in terms of H&S because of a low threat of regulation, ineffective regulatory regime, inter alia, bias in regulation and control. As businesses, these contractors do all they can to stay in business and this was found to drive H&S, especially as they claim to recoup the cost of self-regulating in the course of their dealings in the market. While the aforesaid is labelled under leverage, the quest for maximising profit was found as a strong reason for not self-regulating, especially among Non-SRCs. Admitted that the above determinants explain H&S self-regulatory behaviours among contractors in Nigeria, if the contractors lack the financial capacity to self-regulate or the implementation capacity, they will not self-regulate, according to the respondents. On the other hand, there are some who have the capacity to self-regulate and even take steps that will give them an advantage in the industry.

Given that many in the CSRC group are large and multinational firms and the rest are indigenous contractors, the understanding of how these determinants influence the two categories of contractors and their behaviours as a result are understood. This is where CSRCs have an advantage more than NCSRCs in terms of financial capacity, power resistance, and self-regulatory effects. However, the NCSRCs tend not to be bothered about social legitimacy and not susceptible to social pressure as the CSRCs. Progressing from the advancement in knowledge so far in this chapter, the following chapter presents the results of the perceptions of the respondents on how to improve H&S regulation in Nigeria's construction industry.

CHAPTER 9: THE THIRD FACET OF THE RESULTS — RESPONDENTS' PERCEPTIONS ON IMPROVING CONSTRUCTION HEALTH AND SAFETY REGULATION

9.1 INTRODUCTION

Drawing on the same series of interviews presented in Chapters 7 and 8, this chapter presents the third facet of the in-depth interviews of stakeholders in Nigeria's construction industry. It begins by presenting the overview of the methods, followed by the views of the respondents on ways to improve construction H&S regulation in Nigeria with sparse discussions, then the summary of the chapter. The results here contribute to developing a framework of recommendations for improving construction H&S in Nigeria. This chapter significantly contributes to addressing objective 8.

9.2 OVERVIEW OF METHODS

As this chapter reports the second facet of the qualitative survey, the same methods in chapter 7 also apply here but the analysis for this stage was fully inductive thematic analysis. This is where the combination or mixed purposeful sampling involving snowball and stratified purposeful sampling was adopted. Then there were in-depth interviews of Nigerian construction contractors and key informants (those with direct or indirect association with the industry). The six phases of analysis noted in Chapter 7 also apply here. The analytical triangulation of persons involved three groups: those that constantly self-regulate (CSRC) and those that do not constantly self-regulate (NCSRC), those that do not self-regulate (Non-SRC) and key informants. Just as noted elsewhere in this thesis, the accounts of the respondents in the groups of analysis, and between the groups, are triangulated in convergent, complementary and dissonant ways (Erzberger & Prein 1997; Sand & Roer-strier 2006). Furthermore, there were also triangulations by 'unique information' and 'illuminating' (Sands & Roer-strier 2006). In some places, in this chapter, the above triangulations are purposefully shown. Lastly, reflection, taking memos, and exploring relationships between themes, subthemes and codes were also applied here. This is in addition to the saturation grid that was used to monitor when saturation was attained. Analogous to the previous chapter, the quantification of some of the parts of this result is 'for internal validity, e.g. demonstrating the reach of the analysis across the sample' (Salmon 2013: 2).

9.3 RECOMMENDATIONS FOR IMPROVING CONSTRUCTION H&S REGULATION IN NIGERIA: RESPONDENTS' PERCEPTIONS

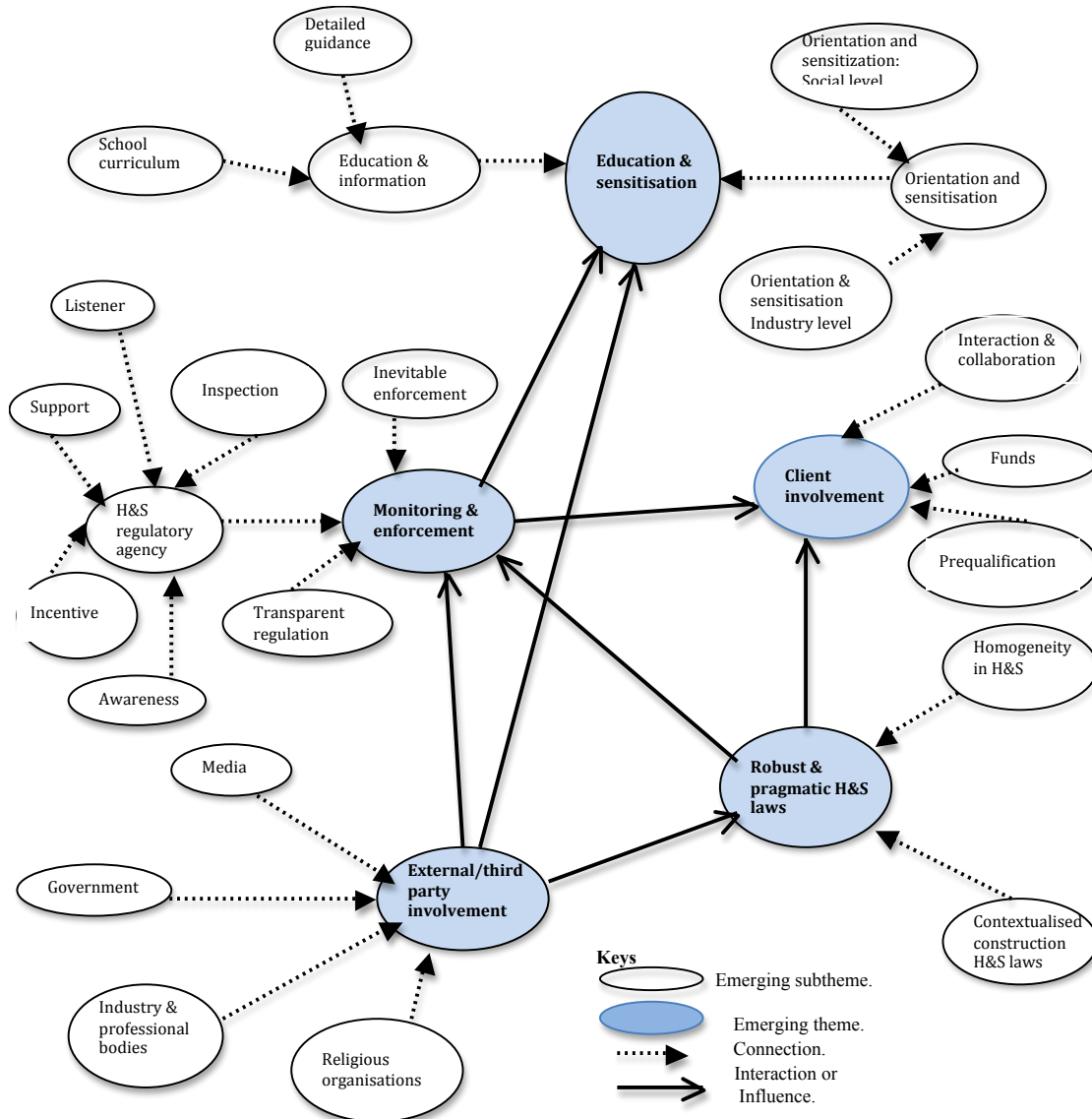


Figure 9.1: Spider diagram of the suggestions of respondents on improving construction H&S regulation in Nigeria. Source: The author's fieldwork.

Figure 9.1 is a graphic illustration of the recommendations of the respondents and the interaction between the themes. The themes are external/third party involvement, robust and pragmatic H&S laws, client involvement, monitoring and enforcement, and education and sensitisation.

9.3.1 Monitoring and enforcement

Historically, adequate enforcement and monitoring contribute to improving the compliance behaviours of the regulated (Gracia Martinez et al. 2007; May & Wood 2003). Thus it is not surprising that it was highly emphasised and portrayed as very

vital in improving H&S self-regulation in Nigeria's construction industry by all the groups, CSRC, NCSRC, Non-SRC and Key informants. However, while not all the groups contributed to each subtheme in this theme, their views contributed to painting a picture of how this adequate enforcement and monitoring will be achieved so as improve H&S in Nigeria's construction industry, — the convergent and complementary ways of triangulation (Sand & Roer-strier 2006). In particular, out of the six key subthemes here, although only the key informants covered the six subthemes painting a full picture of what the respondents have in mind, CSRCs and NCSRCs fully contributed in all but one subtheme respectively, *transparent regulation*, and *inevitable enforcement*'. While the Non-SRCs view that there should be more of physical enforcement, contributing the least overall in this theme, they triangulated the views of the others.

Typically, the views of the respondents show and emphasise that there should be enforcement and monitoring by a national *H&S regulatory and monitoring agency* (which of course, would have chapters in every state of the country) with legislative backing, but independent with no governmental influence. This point of establishing an H&S regulatory and monitoring agency regulatory was emphasised by all CSRCs, all but four key informants and many NCSRCs. Some key responsibilities of this H&S regulatory and monitoring agency should include:

- Supporting and guiding contractors.
- Creating awareness in the industry.
- Providing incentives for contractors, for example, rewarding contractors with good H&S records with tax incentives and awards.
- Most importantly, offering a listening ear to workers and encouraging them and the public to report unsafe practices through various means including mobile devices.
- Site inspection from project inception to completion.

These above indicating that there is an institution with H&S responsibility is already noted in institutional environment and regulatory case.

Conversely, *inevitable enforcement*, a subtheme covered by many contests the above. Typically, very few CSRCs, NCSRCs, Non-SRC and key informants view that without adequate site and company inspection by state actors or private and/or

industry actors who are independent but state empowered, compliance with H&S would be challenging if not impossible because of the attitudes within Nigeria — more like a ‘culture thing’. For example:

‘Nigeria is a very stubborn country so most times enforcement is what they understand [I].

‘You know typically in Nigeria, you have to force them to do things; if not they will not do things. So the issue of monitoring of health and safety should be intensified’ [E]

Although the above inspection and enforcement style may not have produced the desired results in increasing compliance (May & Wood 2003), especially in SME, it is effective in terms of prescriptive regulations as Fairman and Yapp (2005b) found. Consequently, it may be tempting to conclude that as contractors in Nigeria are mainly SMEs, and view that there should be inspections because of contextual issues, compliance will increase. Correspondingly, as the above studies (Fairman & Yapp 2005; May & Wood 2003) are of different contexts, (that is, not *as per* the construction industry, from developed economies and more functional regulatory regimes) inspection may increase compliance provided there are adequate regulations. However, the nature and quality of compliance remains another issue, as there may be one off compliance and/or wrongly perceived compliance to name but few.

Nonetheless, in doing these, there should be transparency and honest, in the monitoring and enforcement process (*the subtheme transparent regulation*), the only subtheme not covered by the CSRC. According to two key informants:

‘They should not be biased and they should not take bribes’ [Respondent ZJ]

‘Intentions are right but the implementations are wrong because they are more interested in charging people to bring in more revenue. What they need is to educate people, not to sanction them. Because once you get to the issue of giving them money, they are willing to negotiate and you are not sure that all the money you have been told to pay goes to government coffers and by the way these clients find a way to avert it by talking to their brothers and people they know who are commissioners and all that and at the end of the day the whole purpose is largely defeated’ [Respondent O]

The above respondents epitomise how the social and political environment has influenced the regulatory activities of state actors, which can be explained by the concept of ‘power relationship’ (Section 8.5.6) based on their experiences, ‘O’ goes on to show how revenues are lost by the government and would rather see more of the

regulatory agency creating awareness over inspections. While this was also covered by CSRCs, it appears to be more important for NCSRCs as it was the most talked about by the highest number of respondents in the group. Nonetheless, the big question remains: considering the money culture in Nigeria (Section 8.4.4.5) how feasible is transparency and honesty in the regulatory activities of state actors in Nigeria? Suggestions to addressing, or rather mitigating the impact of the social environment on H&S regulation are covered in the next chapter.

9.3.2 Adequate client involvement

The client or owner is the financier of the project, employing the services of consultants and contractors. Thus, their involvement is crucial in improving and promoting H&S because of their strategic position in the construction supply chain. There was consensus among the groups, CSRCs, NCSRCs, Non-SRCs and Key informant that the greater involvement of clients with stronger legislative responsibility is key to improving H&S self-regulation in Nigeria's construction industry. The points noted centre on:

- Client involvement (see contextualised construction H&S laws: Section 9.3.4).
- Greater interaction and collaboration between client and contractors on H&S.

Typically, very few NCSRCs and Key informants would prefer that clients and contractors work hand in hand more, in that clients should employ H&S consultants to draft H&S manuals or plans which will be compared with that of the contractors so as to come up with a more robust H&S plan. A key informant comments:

The client should bring his or her own H&S policy rather than have the contractor bring his or her own and the client will adopt the contractor's own, and if the contractor's H&S manual does not encompass all they are doing in the project, it falls short of what is needed [ZQ].

Furthermore, during the entire project, according to the client, a key informant, clients or their representatives would like to know more about what the H&S advisors and consultants are doing at every stage of the projects. There were also suggestions that H&S site inspections by client's representatives would also be beneficial.

There were so many emphases on clients taking into consideration the H&S records of contractors during prequalification, which they view should be carried out by

competent H&S personnel (NCSRCs). This they view would ensure that contractors do not compromise H&S cost in the contract documents. A civil Engineer stated:

'Whoever that is awarding the contract should also ensure that the company is competent enough, competent in the aspect of health and safety. And also if possible, the contractor should show evidence that his company takes health and safety very seriously' [D].

The allocation of adequate funds for H&S was also noted by Non-SRC and few NCSRC and the most emphasised in this theme.

9.3.3 Education and sensitisation

Orientation and sensitisation: despite the strong emphasis by the key informants, CSRCs and NCSRCs, the Non-SRCs did not contribute to this subtheme. Generally, the respondents opine that the improvement of H&S centres on creating awareness on H&S and its benefits at both industry and social levels. This, of course, would be a major responsibility of the state actor(s) in the H&S regulatory process. This appears to be very important to NCSRCs as they emphasise that the benefits of H&S to workers, especially the long-term benefits and the rights of workers under the Employee Compensation Act of 2010 should be core in the sensitisation programmes.

Analogously, the views of just a couple from CSRCs and key informants are largely in agreement with their counterparts, NCSRCs. Indeed, the NCSRCs argue that if workers are fully aware of these, they will hold their employers responsible who will, in turn, have to turn to the client insisting that H&S measures are provided as their employees would hold them responsible in the event of incidents. This sounds good but considering the contextual issues such as lack of employment, the question remains whether the workers who need money to provide for their families can stand their grounds, especially if there are no trade union or industry association support. Nonetheless, it can be argued that if the level of awareness is high the trade associations or gangs of workers may 'key into' the narrative.

Furthermore, the NCSRCs think that the awareness programmes should centre on organisations understanding the benefits of H&S, in that the short term benefits are not worth it and very bad for business. Few argue that as a result of their

understanding of the aforesaid, they go on to seek ways to have advantage over others through steps such as getting certified in H&S (Section 8.5.8.4).

At *social level*, there was emphasis across the units of analysis on the importance of creating awareness in the society right from the grassroots level, e.g. families, churches, and schools. However, only NCSRCs appear to detail the point, triangulating the views of others in terms of fullness or completeness. Some responses centre on a general awareness approach that two respondents among them likened to that adopted during the ‘Ebola scourge’ in Nigeria. Although H&S may not receive such attention, the narrative suggests foremost, the level of attention the respondents claim that H&S requires, and the extent they rate H&S issues nationally. The point here is that:

‘The orientation we have about health and safety has to be changed’ [ZN].

Education and information: A few respondents from NCRCs and Non-SRCs, view that there should be provision for *detailed guidance* for contractors, especially SMEs. They opine that if state actors provide adequate support for contractors in terms of educating them on how to get about H&S or improve the existing measures, they will be motivated, thus H&S will improve. This can be as little as providing contextualised H&S information online. This training should also include persons with H&S responsibilities, as they need to improve their knowledge of H&S.

School curriculum: The point covered here is including H&S in secondary *school curriculum*. They also think that professional institutions, such as COREN and CORBON, which accredit Engineering and Building courses in universities should also ensure that it is included in university modules and even offered as a full degree.

‘All the professional bodies need to understand that when we go to our schools, we need to learn H&S. Simple! I don’t think there is any university that does health and safety or anything relating to that. [H].

While respondent H may have thought wrongly in term of the last sentence, the point that H&S should be commonplace in university modules or courses is highly stressed. Industry associations roles in educating or sensitising their members was highlighted. In addition to providing H&S information online, which is noted elsewhere, the respondents opine that education and sensitisation can be achieved through:

- State actors organising H&S workshops for contractors

- The use of social and news media.

9.3.4 Robust and pragmatic H&S laws

The point here is that contextualised H&S laws that address a lot of the barriers, contextual issues including the regulatory bias and corruption among state actors, are needed if H&S is to improve in Nigeria, according to the respondents. The laws will ensure a homogeneous regulatory system across the industry.

Contextualise construction H&S laws: as stated elsewhere in Chapters 1 and 3, the main local H&S laws, Factories Act of 2004, covers only factories — construction sites and activities do not belong by the definition of the law. Understandably, many key informants, including consultants and state actors, and NCSRCs view that thee H&S laws should be designed to meet the conditions of Nigeria. This was supported by a few CSRCs. The respondents below echo the discourse, with respondent A suggesting that H&S cannot improve until H&S laws are contextualised:

Regulations should be prepared, considering domestic issues, which will enhance the health and safety of the construction industry [A]

The government should start by setting up H&S policies and procedures. All these H&S regulations we have here are from UK and US but we need to contextualise our own law to Nigeria so they need to come out with their own version of health and safety laws. You cannot put a round peg in a square hole'. [ZM]

Admitted that the National Building code of 2006 and the Labour, Safety, Health and Welfare bill of 2012 (amended in 2016) are designed based on local conditions, they are not yet signed into law. Authors such as Aniekwu (2007) report that the adopted H&S laws and standards are impracticable and irrelevant in the Nigerian construction industry. Based on the current conditions of Nigeria, including the lack of capacity of the industry, the nature of these adopted regulations may explain the position of Aniekwu (2007), according to Umeokafor and Windapo (2016).

Understandably, many of the respondents view that there should be detailed construction H&S laws. These H&S should cover and stress client and consultants responsibilities; a point well noted by all, CSRCs, NCSRCs, key informants, and Non-SRCs, in convergence. The views the various groups complemented each other

or provided ‘unique information’ to provide a good understanding of what the respondents opine. The respondents view that:

- By law, for clients providing funds for H&S, it should be mandatory to specify a minimum percentage of the contract sum for H&S.
- Client strongly considering H&S when prequalifying contractors, verifying the H&S records of contractors.
- By law, clients should be more involved in H&S (for example, depending on the magnitude of projects, there should be H&S representative/personnel on site), holding them responsible for H&S with fines and prosecutions for breach of the laws.
- The laws should also hold consultants responsible for H&S
- By law, there should be H&S consultants and/or coordinators, just as there are other consultants that supervise projects. For example:

‘The law should make clients have safety consultants and not just depend on what the contractor does’ [Respondent M]. So *‘if there is a law that clients should appoint H&S consultants right from the design stage, safety will improve’* [Respondent D]

These H&S consultants should monitor and enforce H&S standards on site.

While the respondents correctly recommend that there should be a minimum percentage of the contract sum allocated for H&S, this may create room for corruption and deception from contractors handling small projects for small clients who may just depend on the contractor’s H&S specification and bill. Further, it may result in overpricing H&S, of over-allocation of funds for H&S, resulting in very high project costs, which will demotivate clients and may even be viewed as illegitimate by the clients. As a result, the clients may be forced to ‘cut corners’. Rather, the provision of funds for H&S should be determined by H&S budget, but the client should make provision for contingency.

Other main points covered in this subtheme by many NCSRCs and a few key informants are:

- No discrimination for casual workers in terms of H&S programmes.
- All projects must be registered to the proposed construction H&S regulatory agency, as noted in ‘monitoring and enforcement’ (Section 9.3.1).

While there should be construction H&S laws, they should be domesticated, designed to fit into the Nigerian construction environment; a subtheme well covered below.

Homogeneity in H&S regulation: as a result of the regulatory environment of Nigeria, the regulatory processes and adopted laws are heterogeneous, resulting in a complex regulatory system (Chapter 7). There were indications, especially among NCSRCs that consistency in the regulatory process, laws, and procedures would improve and drive H&S, among SMEs. Very few key informants supported this where the quote of one, respondent PZ, on ‘inconsistent and complex regulatory regime’ fits in here.

9.3.5 External/third party involvement

In addition to the emphasis on governmental involvement through the provision of adequate H&S laws and establishing an H&S regulatory agency, there were repeated calls for governmental involvement by all the groups. The respondents, went on to also seek the involvement of other parties such as:

- Media involvement: reputation management — naming and shaming companies with poor H&S standards; sensitise people on H&S; involvement in H&S audit, from pre-construction to post-construction; auditing the activities of the H&S regulatory agency.
- Professional bodies and industry association, which has been covered in ‘education and sensitisation’ (Section 9.3.3).
- Religious organisations that should educate people on H&S.

While the respondents have good recommendations, implementation remains another issue. The question is how to get the media involved and interested in H&S, if they gain nothing? How do religious organisations to take part? Even if these organisations take part, how effective will it be? Of course, legislative wise, this is highly impossible. Business wise, the media be interested if they will make money.

While the respondents emphasise strong state involvement in H&S, some suggest that there should be goal-based regulation, which creates room for innovation among contractors. However, many NCSRCs and Non-SRCs view otherwise, but agree that there should be a higher level of flexibility in the regulatory process so contractors can enjoy some degree of freedom. While it is obvious that the respondents agree to self-regulation, not agreeing to goal-based regulation, this suggests that SMEs may prefer ‘prescriptive regulation’ (Hale et al. 2013) or a combination of both (Section 2.2).

9.3.6 Interaction between themes

The themes above interact in various ways (Figure 9.1). For example, external involvement contributes to robust and pragmatic H&S laws, education and sensitization, and monitoring and enforcement. In particular, the government will be involved in providing the robust and pragmatic H&S laws, establishing the H&S regulatory agency in ‘monitoring and enforcement’. Industry association and professional bodies (external involvement) activities can be found in ‘education and sensitisation’. Furthermore, in ‘monitoring and enforcement’, the activities of the H&S regulatory agency will include educating the public and the construction industry which is under ‘education and sensitisation’ and monitoring client involvement. Meanwhile, adequate H&S laws as in ‘robust and pragmatic H&S laws’, will stipulate client involvement and empower the state H&S regulatory agency that will be established.

9.4. SUMMARY

This chapter presents the suggestions of the respondents on improving construction H&S regulation in Nigeria and sparse discussions. Highly informed by the contextual environment, the respondents view that adequate regulation of H&S, which should be focused on inspection, and creating awareness on H&S should be core. However, the social, political and institutional contextual factors should be addressed by contextualising H&S laws, third party involvement in H&S where, among many, parties like the media and social actors should be encouraged to ‘shadow’ the activities of the state actors. The involvement of clients in improving H&S is also well emphasised, but that will have the backing of the law, monitored by an external party, the H&S regulatory agency. Above all, governmental involvement is also emphasised, through ways such as providing robust and pragmatic H&S laws that many suggestions above will be built on. The following chapter presents a discussion of the results of the study and develops framework of recommendations for improving construction H&S regulation.

CHAPTER 10: GENERAL DISCUSSION OF RESULTS

10.1 INTRODUCTION

In explaining and understanding the current realities of practices in H&S regulation in the Nigerian construction industry, *i.e* the overall goal of the study, this chapter discusses the themes emerging from the preceding three Chapters, 7, 8 and 9. Classified under non-state actors regulation, local/international statute-based regulation, and voluntary regulation, the first section discusses the approaches to self-regulation: client-led, enforced, voluntary, industry-led, H&S crusader-led, and community-led. Furthermore, the attitudes of the contractors in Chapter 7 are discussed under two categories: ‘optimum H&S self-regulation enhancing attitudes’ and ‘optimum H&S self-regulation constraining attitudes’. Additionally, the attitudes ‘convenience’, ‘secondary’, ‘camouflage’, are challenged alongside questioning the suitability of the constraining aspect of ‘tick-box’ and ‘responsibility’. This is in addition to applauding ‘primary’ attitude and the enhancing aspect of ‘tick-box’ and ‘responsibility’. Above all, this section goes on to challenge the premise that the Nigerian construction industry is unregulated, rather adduces that it is self-regulated. This section addresses the first and second research questions (see Section 1.1).

The second Section discusses the direct and indirect drivers, motivators, barriers and constraints of H&S self-regulation already presented in Chapter 8. The interrelationships among these factors and/or the themes in Chapter 8 are further explored, challenged and expanded where appropriate. This addresses the third research question (see Section 1.1). Drawing on Chapters 7 and 8, a framework that advances the understanding and critically explains the current realities of construction H&S regulation in Nigeria is produced, addressing objectives 7. Based on this and Chapter 9, a content framework of recommendations is developed, addressing objective 8.

10.2 APPROACHES TO REGULATING H&S: CURRENT REALITIES

Figure 10.1 shows the current realities in terms of the approaches to regulating H&S in Nigeria’s construction industry. It shows that industry regulation can fall into voluntary regulation (*i.e* the regulating industry is not bound by any statutes) and

local or international statute-oriented regulation. The study found that the Nigerian construction industry is self-regulated in various forms, as reported in Sections 7.4.1–7.4.6. This is where in terms of H&S the industry is voluntarily self-regulated, forced to self-regulate, or led to self-regulate H&S due to communities’, clients’ or ‘H&S crusader’ involvement.

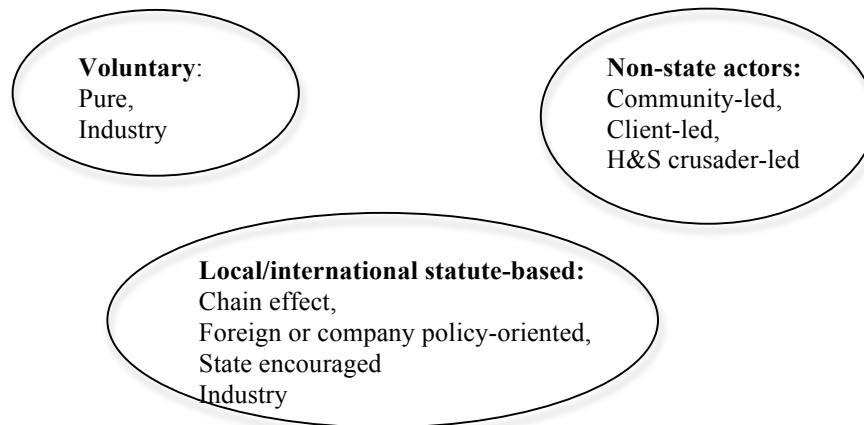


Figure 10.1: A summary of the current realities of the approaches to regulating H&S.
Source: The author fieldwork.

The literature review provides evidence that Nigerian construction contractors self-regulate in various forms (Section 3.3.1). In the results (Section 7.4), this is verified and other self-regulatory approaches, H&S crusader, and community-led H&S self-regulation, established. These findings challenge the position of authors such as Diugwu et al. (2012), Idoro (2008; 2012), and Umeokafor et al. (2014) that the Nigerian construction industry is unregulated in terms of H&S; however, the findings also support the position of Umeokafor (2016) that the Nigerian construction industry is not unregulated but self-regulated in various forms. The position of Diugwu et al. (2012), Idoro (2008; 2011a), and Umeokafor et al. (2014) is based on the fact that the definition of premises in the Factories Act of 2004 means that the construction sites and activities are not covered by the aforesaid law. However, these authors acknowledge that some contractors go on to adopt H&S standards and laws and implement them. If this is the case, then the interview findings supporting the view that the Nigerian construction industry is self-regulated are deemed valid and consistent with the concept of self-regulation described by Castro (2011), Giunningham (2011), Havinga (2006), and OECD (2015).

Significantly, Table 7.1 shows that both multinationals and domestic contractors self-regulate and that while large contractors are mostly CSRCs, medium and small contractors, are also involved in self-regulation. Table 7.1 also shows that all NCSRCs are indigenous contractors where all but one are SMEs; the 'one' is a large contractor. It is, however, expected to find that only indigenous contractors without any large-scale contractor do not self-regulate (Table 7.1). These findings suggest: granted that H&S matters can be viewed or addressed based on company size and/or ownership perspectives, it may be naive to continue viewing H&S solely from the aforesaid basis because geographic location and scope of operation remain significant. It is more logical to view CSRCs, NCSRCs and Non-SRCs based on the characteristics they have in common respectively, for instance, the structural advantage of CSRCs.

That the Nigerian construction industry self-regulates in an environment where there is a lack of governmental involvement in H&S and no local H&S law covering the industry suggests some level of commitment towards H&S. It indicates the possibility of accepting a local H&S law-supported regulatory regime by the construction industry when the Labour, Safety, Health and Welfare Bill of 2012 (which was revised in 2016) is passed into law. This acceptance is with or without adequate governmental involvement in H&S. This acceptance of H&S regulatory regime in the midst of inadequate governmental involvement or commitment is especially important, as there is compelling evidence of lack of political and governmental commitment towards H&S in Nigeria (see political environment in Section 8.4.3). Above all, it is realistic to address H&S without depending on governmental involvement as the Nigerian construction sector is already doing. This should not be misconstrued as arguing that local H&S law-supported H&S regulatory regime will result in optimum H&S in the industry, rather, a local H&S law-supported regulatory regime will improve H&S in the industry. This is because it will be contextualised. It will also support independent organisations such as H&S crusaders who are already influencing H&S but face challenges in terms of ensuring compliance with H&S laws because of the lack of local H&S laws in Nigeria.

Most importantly, the H&S crusader-led self-regulation, the community-led H&S self-regulation and client-led self-regulation remain among the significant and novel

contributions of the current study. These indicate other areas or explanations for self-regulation; they are discussed in detail further in this chapter.

Granted that the industry is self-regulated, and according to Hutter (2006), self-regulation differs from country to country, the variety in approaches to construction H&S self-regulation in Nigeria, which is multiplex may negatively impact on the regulation of H&S in Nigeria. In particular, it is evident that a multiplex H&S regulatory environment results in a dysfunctional H&S regulatory regime, a lack of uniformity, and an unsystematic and questionable quality of regulation. This is evidenced in various places in Chapter 7. For instance, the construction contractors in Nigeria may consider the regulatory options and programmes and their downsides and decide not to self-regulate or to self-regulate at a convenient level. Each regulatory approach comes with different requirements, procedures, challenges, opportunities and even certification. This may increase regulation or H&S costs for contractors as they may spend more on meeting the requirements of the variety of H&S regulatory approaches, which may impact on the quality of H&S self-regulation.

10.2.1 Voluntary regulation and Local/international statute-based regulation

Pure H&S self-regulation

According to Section 7.4.1, there is evidence in the study that contractors voluntarily self-regulate. While this is in agreement with the description of pure-self-regulation in the literature (Castro 2001; Gunningham 2011; OECD 2015), it is also consistent with the adoption and administration of H&S legislation by Nigerian contractors (Diugwu et al. 2012; Famuyiwa 2011; Idoro 2008, 2011a). Admitted that the latter authors do not denote the premise with the word 'self-regulation'; they argue that the construction industry is unregulated because the Factories Act of 2004 excludes the construction sites and activities by omission or commission; however, the contractors adopt H&S legislation and implement them. Other authors such as Tanko and Anigbogu (2012) also note that Nigerian construction contractors adopt and implement H&S legislation from developed countries.

The questionable or poor regulation due to its voluntary nature is reported in Gunningham (2011). However, he lauds pure self-regulation because of its ability in

ensuring flexibility and fitting into the norms or practices of the industry. The standard of pure self-regulation is questionable as can be seen in Section 7.4.1. For instance, that H&S is viewed as an individual affair may mean that the uninformed in terms of H&S may continue to get things wrongly. Further, H&S compliance should not be about ‘cherry-picking’ or ‘affordability’ (Section 7.4.1). The ‘cherry-picking’ can be explained by the perceptions of the contractors that H&S self-regulation is: only at convenience — secondary (Section 7.5.6), a tick-box exercise (Section 7.5.3), the responsibility of only large contractors or even the employees themselves (Section 7.5.2). Cherry-picking or compliance based on affordability may, in turn, explain the overemphasis or over-reliance on the individual risk control measure, which is the lowest on the risk control hierarchy. Risk control after considering the elimination of risk, substitution with a less risky option, among many, should start with the collective protection such as guard rails or safety working platform, but PPE should be used as a last resort. Further reasons why the quality of H&S may be impacted because of pure self-regulation in Nigeria is that the few NCSRCs adopt H&S at the preconstruction stage and do not fully implement it at the construction stage. While this may be explained by ‘convenience’ (Section 7.5.2), ‘tick-box’ (Section 7.5.3) and ‘camouflage’ (Section 7.5.5), the aim of designing through prevention, or other preconstruction H&S measures is also defeated.

Furthermore, it is expected that this incomplete H&S regulatory attitude is noted by mainly NCSRCs (who are all indigenous contractors) and the H&S compliance based on affordability is reported by mostly small contractors in the NCSRCs group (Section 7.5.1). This is because small firms are disadvantaged in regulatory matters and do not have the equal capacity as their large counterparts. Typically, according to Vickers et al. (2005), regulatory frameworks do not consider the challenges that the sizes of firms present to small firms. Small firms are already limited in terms of resources (Windapo and Jegede 2013); the managers/owner of these firms find it difficult understanding H&S requirements (Fonteyn et al. 1997); these small firms are not preferred in the award of contracts (Idoro 2010); their motives for compliance with H&S regulations differ from that of large contractors (Umeokafor 2016).

It is logical to conclude that while pure self-regulation is better than no regulation, if there is an alternative, it is not recommended. This is supported by the position of McAllister et al. (2010) as seen in Section 2.8 who appear not to recommend pure self-regulation for industrialising nations because of weak state enforcement.

Industry H&S self-regulation

The literature review covers industry self-regulation in detail where it occurs in various forms, one being between the regulated and the industry (Section 2.4.2.4). While this is consistent with the empirical data of the current study (Section 7.4.3), the current study does not reflect third party involvement which the literature review shows as crucial (no matter how minimal) so as to complement governmental involvement, and/or oversee the activities of the parties (Section 2.4.2.4). Indeed, DiMento (1999) maintains that third parties can alert the government of the excessive use of power and/or unnecessary regulatory activities. In attestation, Watterson (2006) shows how trade unions take H&S responsibility for inefficient regulators due to failed industry or state regulation, prompting employers to have members of trade unions in their management levels to contribute in various regulatory spheres.

There are, however, concerns with third party involvement in industry self-regulation. For instance, Gracia Martinez et al. (2007) point to the social and cost interest of the parties, their various motives in regulation, and their relationship, which will determine the co-regulatory framework. There is usually a big gap between the interest of the regulated and the public, especially when there is no government intervention (Gunningham 2011). There is also concern on the congruent or discord in the views of employers and trade unions (Levinson 1987). All in the current paragraph do not support regulation.

It is vital to note that the literature review concludes that there is no universal approach to industry self-regulation due to the disparity in national culture and cultural difference (Gunningham 2011; Hutter 2006). In other words, that there is no third party involvement does not mean that industry regulation would not be 'fit for purpose'. This can be seen in the case of Nigeria as the industry appears to contribute to improving H&S. For instance, there is evidence in the empirical data supported by literature that contractors in the oil and gas sector have a better H&S record than

others or at least that the influence of industries such as the oil and gas industry is profound in improving H&S (Sections 7.4.3 & 8.5.5.7; Windapo & Jegede 2013). Thus, this good or at least better H&S regulatory practices can be seen in the act of prequalification of contractors on standardised means such as PREMOB and in specific areas such as during preconstruction (Section 7.4.3). The consistency in the pattern of industry self-regulation in terms of H&S in Nigeria despite the variety in industry remains surprising (Section 7.4.3). It can be argued that this may be that a lot of these contractors copy what obtains in countries such as UK or that they are affiliated to developed countries or industrialised countries. While this suggests yet another global link hence tempting to categorise it as foreign or company policy-oriented enforced self-regulation, it differs just as client self-regulation is to industry self-regulation. Recall, this is because of, among many, the level of consistency and homogeneity in methodology and regulatory instruments in industry self-regulation (Section 7.4.3), which is not in the aforesaid two approaches. Industry self-regulation in this context is the industry in which the contractors work. This is a little different from literature where the parent industry of the firms, for instance, manufacturing set standards and carries out enforcement (Section 2.4.2.4). However, the rationale for categorising this under industry self-regulation is that the contractors are also part of the industry that they work in as much as they are part of the construction industry.

Mandatory/Enforced H&S self-regulation

The literature review shows that enforced H&S self-regulation is commonplace in many countries, but manifests or operates in many ways (Section 2.4.2.4). It goes on to show that enforced self-regulation mainly occurs between the state and industry or organisation — a combination of state regulation and private regulation (Section 2.4.2.4). The contribution of the state can be by directly or indirectly providing statutory requirements, local or international. While this combination of private and state regulation is consistent with the field data of the current study (see state encouraged compliance/co-regulation: Section 7.4.2), the current study expands and contributes to the discourse by showing two additional types of enforced H&S self-regulation. First, the chain effect — from the large contractors to the small contractors — a consequence of the domino effect; second, foreign company policy-oriented enforced self-regulation (Section 7.4.2). This advances the extant literature, and contributes to understanding the discourse better. Also, the state encouraged

compliance/co-regulation is significant in that it only involves one state (out of the 36 states in Nigeria) self-regulating. This may best be described as a ‘state-within-a-state-led’ regulation. This is different from devolved regulation where regulatory bodies are empowered by statute or delegated regulation where public bodies transfer exercising of statutory duties to self-regulatory bodies (Bartle & Vass 2005). This is because Nigeria does not adopt a devolved regulatory system; there is no statute (at least officially) that empowers or delegates regulation of H&S to Lagos state or other states. However, it appears that they are not breaking any law by doing such as a respondent from the LSSC reports. This may be viewed as one of the flaws of the regulatory environment of Nigeria.

In terms of the state encouraged compliance/co-regulation, it can be inferred from Section 7.4.2 that the regulatory process of the LSSC is questionable at best and highly flawed at worst; it even gives a false impression of what compliance is. Targeted enforcement, which remains one of the flawed regulatory practices of LSSC (Section 7.4.2), is consistent with literature (Section 2.6.3.6). Although Section 2.6.3.6 indicates that targeted enforcement may be adequate where the regulator has limited resources, but not without downsides, it can be argued that LSSC is within reasons to engage in targeted enforcement, as it has limited resources. Priyadarshini & Gupta (2003) found that the lack of skilled person power and inadequate funding lead to inadequate monitoring. However, social issues such as corruption and wrong motives for enforcement such as ‘balancing account books’ may significantly impact on the output if not the efficacy of targeted enforcement. Indeed, if the regulated in Lagos state can ‘pay their way out’ of enforcement, only specific sites or contractors who do not ‘pay their ways out’ are visited. Consequently, the aim of targeted regulation — channeling limited resources to organisations with high risks so as to scare other defaulters and at the same time achieve compliance in the high-risk projects — may be defeated.

Another issue that raises concern on the regulatory process of LSSC is the use of goal-based or non-prescriptive laws. While it can be argued to be a feature of self-regulation in that it ensures flexibility in compliance and regulation and that it is widely used, from Section 2.2, it can be seen that it is unlikely to be realistic to use it in Nigeria, especially because of the high vulnerability of contractors in terms of

H&S. SMEs have limited resources in terms of human and financial and may not afford the cost of paying for experts to explain or interpret the laws. It is vital to recall that Nigeria lacks adequate regulatory frameworks including laws to support a goal-based approach. This is not to say that prescriptive laws are recommended, rather a mixture of both or an initial prescriptive system and a latter introduction of goal-based may be better. This will mean that there is already something (for example, guidance) on the ground for the contractor to work with.

The use of safety compliance certificates by LSSC, as Section 7.4.2 shows, may be good, but that may create a false impression of what constitutes compliance (Fairman & Yapp 2005a). However, it can be argued that LSSC is not solely dependent on the aforesaid. Again, the question of the suitability of such in Nigeria considering the poor H&S knowledge may result in the ‘tick-box’ attitude reported in Section 7.5.3. The multiple regulators in Lagos state suggests that there will be: a high level of bureaucracy, complexity in roles and responsibilities, confusion due to multiple sources of information, and an increase in the cost of compliance.

Based on all the above, it emerged that contractors appear not to accept LSSC or at best view their activities as unfair (Section 7.4.2). This does not only constitute a barrier to self-regulation as can be seen in normative judgment (Section 8.5.3), but it may also result in the regulated not fully participating in self-regulation hence self-compliance will be challenging. However, it is pertinent to laud the efforts of Lagos State Government for its step in promulgating a local H&S law and regulating it.

Further implications of the ‘state-within-a-state-led’ regulation include reports that another state in Nigeria (name withheld) is ‘following the footsteps’ of Lagos State in terms of regulating H&S. While ‘following the footsteps’ of Lagos State is commendable and positive, it has significant downsides not limited to the following if more or most of all states do so. First, this will result in a higher cost of compliance for contractors in Nigeria whose works cut across many states in Nigeria. Second, the level of complexity and fragmentation in H&S compliance and regulation will increase which may result in contractors viewing the H&S regulatory systems as unfair. It is vital to remember that the complex and fragmented H&S regulatory environment of Nigeria, which is demonstrated throughout this thesis, has negatively

impacted on H&S regulation. This is consistent with Nielsen (2003) who notes that heterogeneous industry and regional structures result in complex and resource intensive regulation of standards and laws. Third, although better than nothing, 'state-within-a-state-led' regulation may result in the low standard of H&S regulatory instruments and policies.

It is logical to view that 'state-within-a-state-led' (devolved) regulation may be suggesting that a devolved H&S self-regulatory systems in Nigeria would be more acceptable and more effective. This is because considering the profile of Nigeria where the landmass is huge; the population, the largest in Africa; and there are 36 states (all resulting in the creation of six geopolitical zones for better governance), it will give states or geopolitical zones a smaller area to regulate or channel the resources they have. The states will also have a better understanding of social, political, economic, institutional and cultural issues limited to their localities.

Considering the points in the foregoing two paragraphs, it is logical to conclude that the benefits of the 'state-within-a-state-led' regulation do not outweigh the downsides. As can be seen in various places in this thesis the complexity that 'state-within-a-state-led' (or devolved) regulation would result in is already a significant barrier to construction H&S regulation in Nigeria resulting in, among many, counterproductive regulation (Section 10.4.2). Furthermore, the cost implication is also a barrier to H&S self-regulation; for example, see Section 10.4.2 structure advantage and ability to self-regulation. As a result, a homogeneous H&S regulatory framework is recommended (Section 10.6.1).

Regarding the other two types of enforced self-regulation, chain effect and foreign company policy-oriented, it can be argued that the foreign company policy-oriented reflects the roles of globalisation in H&S self-regulation. It shows that the parent companies of the multinationals in Nigeria can significantly contribute to improving H&S. The foreign policies of these multinationals mostly adhere to international standards or their home-country H&S laws, which are normally underpinned or aligned to international standards. The literature review shows the influence of globalisation in self-regulation (Section 5.2.2). For example, while discussing globalisation as a determinant of self-regulation, Christmann and Taylor (2001) note

that the presence of multinational firms in developing countries may mean that their subsidiaries will self-regulate more than domestic firms in the country. This can, however, make the subsidiaries self-regulate to the extent that they are capable, or to the extent that they perceive as acceptable. Idoro (2004) offers a treatise on global integration between safety legislation and standards and the Nigeria construction industry.

As a lot of medium-scale contractors are dependent on the large contractors and the small-scale contractors (perhaps a little) dependent on the medium-scale ones, forming the 'domino effect', if the large contractors drive the regulatory process, it can be argued that large contractors can be held more accountable for H&S. This is realistic, as the contractors would rather comply with standards set by the large contractors than lose the contract. Diugwu (2011) agrees with this as he indicates the collaboration between SMEs and large firms in terms of improving H&S, as the large firms are keen on it.

If the premise in the preceding paragraph is the case, the responsibility placed on employers of subcontractors who in this context will be the large contractor should be broadened to cover in more detail the subcontractors. Of course, this is in the context of Nigeria. Windapo and Jegede (2013) appear to note such a gap in H&S responsibility in the supply chain in Nigeria's construction industry. The content framework of recommendations covers statutory H&S responsibilities for main contractors over subcontractors (Section 10.6.2).

It can be argued that the chain effect is not different from extant literature, however, it should be noted that the literature does not address H&S from a regulatory perspective. This means that subcontractors do not depend on the large contractors to regulate their activities in terms of H&S due to the absence of local H&S laws. In other words, it can be argued that while this is consistent with literature to some extent, if viewed in the context of Nigeria or from a regulatory perspective, it is significant but may not be novel. The literature in question is not limited to Manu et al. (2013) and Mayhew and Quinlan (1997) who already acknowledge the influence of large contractors in influencing smaller contractors (otherwise subcontracting) on H&S and the impact of subcontracting on H&S performance. Manu et al. (2013)

focus on in-house measures by main contractors for managing H&S influence of subcontractors in the UK. Studies such as Umeokafor (2016) corroborate the inference of these two types of enforced self-regulation in that the size of contractors remains significant in explaining and driving H&S self-regulation.

10.2.2 Non-state actors-led regulation

Client-led H&S self-regulation

The involvement of third parties (such as clients, employee association, insurance firms) excluding the government in the regulation of H&S is covered in literature, (Hutter 2006; Kheni et al. 2007; Kheni 2008) in Section 2.7. Typically, the study of construction contractors and institutions in Ghana avers that international donor agencies not limited to Department for International Development (DFID) include health, safety and welfare clause in the contracts as required by ILO, and they also enforce it (Kheni et al. 2007). Kheni (2008) goes on to affirm the influence of the international clients in regulating H&S. In other words, they play the roles that the regulatory state plays in the command and control approach, demonstrating greater leverage over organisations. The results in Section 7.4.4 are consistent with the above with emphasis on the influence of international clients in leading H&S regulation in Nigeria and showing concern on the nature of client in self-regulation.

Similarly, the results in Section 7.4.4 show that mostly NCSRCs and respondents from CSRCs who have worked for SMEs have experienced client-led H&S self-regulation. As Table 7.1 shows, all NCSRCs are indigenous contractors, and literature shows that SMEs are indigenous, this indicates that client-led H&S self-regulation may mostly occur in indigenous contractors. This is consistent with Umeokafor (2016) who found that while few medium-scale and few small-scale contractors (who are largely indigenous) mostly experience client-led H&S self-regulation; no large contractors that took part in the study have experienced client-led H&S self-regulation. This may be explained by the argument that many large contractors (who largely make up CSRCs in Table 7.1) may have an existing high level of H&S standard, thus clients may not lead the self-regulation. Indeed, if CSRCs engage in foreign or company policy-led enforced self-regulation, the client may see no need to lead H&S regulation, but will, of course, be involved in H&S. An example of the aforesaid can be seen in Section 8.5.5.8 where the structural advantage of large

contractors gives them an edge in terms of H&S; among many, they have minimum standards of H&S that clients must accept and fund.

If indigenous contractors mostly experience client-led self-regulation and international clients drive client-led H&S self-regulation, does that mean that international clients only patronise indigenous contractors? This may not be the case as the following may explain. First, again, the argument in the preceding on the little or no need for client involvement in CSRCs is replicated here. Second, it may be that the respondents from CSRCs did not comment on client-led H&S self-regulation because of the aforesaid point so it may not be significant to them. However, they noted client influence in supporting H&S (Section 8.5.5.7).

There are, however, issues of concern that the results in Section 7.4.4 show: it was found that public clients, the government, lag behind in self-regulating H&S. Alternatively, no evidence of governmental commitment to H&S self-regulation was found. Kheni (2008) also reports poor governmental attention to H&S in Ghana, even though the country (just like Nigeria) has ratified the ILO convention.

The client is strategic in the construction supply chain, thus vital in driving H&S. Umeokafor (2016) found that three-quarters of respondents claimed that client-led H&S could be more effective than industry-mandatory H&S self-regulation. As the government is the largest client of the construction industry in Nigeria, if the results of this are replicated in the whole industry, then it is an issue of concern in terms of H&S regulation. Two papers, Umeokafor (2017b & c), inspired by the current study offer a treatise on client involvement in construction H&S in Nigeria.

H&S crusader-led self-regulation

While Section 2.7 demonstrates the role of non-state actors, it dwells more on the roles of economic actors whose contributions include: mandatory gatekeeping, gathering information for effective regulation, setting premiums based on the performance of firms (also see Hutter 2006). This may be indirectly supported by statute, for instance, it may be a legal requirement that insurance is mandatory. Section 2.7 goes on to dwell on the roles of civil actors such as NGOs and charities. The results in Section 7.4.5 show that H&S crusader-led H&S regulation is consistent

to some extent with the above premise in that it involves non-state actors. However, it is inconsistent and significant because the non-state actor, the H&S crusaders, do not have any state (whether local, national or international) backing through statutes or otherwise.

Above all, Section 7.4.5 indicates that in the midst of inadequate governmental involvement, but with adequate (or at least improved) H&S laws, efforts from non-state actors may significantly contribute to improving H&S. Inference can be made from Section 7.4.5 that H&S crusaders may be engaging in some kind of consultancy, for instance, advising on H&S, however the regulatory activities are clear. While it can be argued that the H&S crusaders may be business motivated, their contribution to improving H&S, especially regulation, should not be ignored. Also, the reputation management in the form of naming and shaming reported in this approach is consistent with literature review (Section 2.6.3.2). While this can be effective, positive publicity strategy may be more effective (Section 2.6.3.2).

Furthermore, Section 7.4.5 goes on to suggest the acceptance of non-state actors by contractors to some extent in regulating or improving H&S. For instance, the contractors would not allow the H&S crusader to inspect their workplaces if they do not accept the crusader. They will not voluntarily seek the support of the H&S crusader as Section 7.4.5 shows. Whether it is as a result of possible implications of the actions of the H&S crusaders or because they find the services of the H&S crusaders beneficial, at least the H&S crusaders are influential. It is vital to stress that this is just indicative of what can obtain in Nigeria and should not be misconstrued as commonplace. However, it is significant and worth reporting.

Community-led H&S self-regulation

The contribution of communities in regulatory matters in the society or even in H&S is not new and is covered in Section 4.5.2. For example, Nkonya et al. (2005) report the collaborative regulation of national resources (including making bylaws) between local councils and communities in Uganda. Nkonya and colleagues found that the regulated is more likely to comply with such laws than with those enacted by higher legislative bodies (2008). Similarly, there is community policing in the UK and community road watch where the communities report over-speeding vehicles or

antisocial behaviours. The collectivist culture noted in Chapter 4, which manifests in ways not limited to kinship and family, creates an enabling environment for community influence. The literature review covers kinship and family in Section 4.5.1 showing the high level of influence that extended families have where in most cases they can coordinate and control matters in the society. These matters can include H&S. Section 4.3.1.1, also shows that the collective cultural dimension contributes to improving H&S in developing countries. Communities' contribution to H&S is well emphasised in community-led H&S self-regulation (Section 7.4.6).

Most importantly, while community-led H&S self-regulation is significant, there are some vital points about it. First, Section 7.4.6 suggests some geographic orientation to community-led H&S self-regulation; this is consistent with 'state-within-a-state-led' regulation reported elsewhere in this chapter. Possible explanations may be the high-risk activities of the oil and gas industries in the Niger Delta area, which result in, among many, oil spillage, loss of aquatic habitats, deaths, and injuries. As a result, the oil and gas industries in Niger Delta highly consider H&S and the environment. The oil and gas being a lucrative industry (alongside getting value for their money in the area) spends a lot in the area in return both in terms of social responsibility and compensation. While this is good, the premise in this paragraph gives the locals a wrong impression, for instance, turning H&S as a means of making money (Section 7.4.6). These explain the attitude 'exploitation in camouflage' in Section 7.5.

Second, Section 7.4.6 also shows a high level of uncontrolled activities by the communities including those done under the guise of enforcement, for instance, kidnapping. These communities appear to have excessive powers, as Section 7.4.6 also shows. While these uncontrolled activities empowered by excessive powers may explain the fear that some contractors in the areas live with or work under, to the communities, it can be getting what they want. Whether it is an adequate price to pay to achieve H&S, and these actions achieve H&S and to what extent, is another topic for discussion.

Third, the points discussed in the preceding two paragraphs suggest wrong motives for community-led H&S self-regulation including the corrupt practices reported in Section 7.4.6. The impact of corruption on H&S, the construction industry, and

Nigeria is covered in detail in Section 4.2.5. The premise established so far may also explain the poor relationship between contractors and communities that Section 7.4.6 suggests. It also results in the tension in the supply chain (Section 8.5.5.2). This, of course, leaves the NCSRCs disadvantaged.

10.3 CURRENT REALITIES OF CONSTRUCTION CONTRACTORS' ATTITUDES TOWARDS H&S SELF-REGULATION

Informed by Section 7.5, the attitudes of contractors can best be described as having constraining and enhancing effects on H&S self-regulation; Table 10.1 shows the classification of the attitudes (themes and subthemes as appropriate) in Section 7.5. On face value, Table 10.1 shows that attitudes of the contractors, which constrain H&S self-regulation, are emphasised, perhaps explaining the poor H&S records noted in Section 3.3. However, considering the fact that the contractors self-regulate in the current fragmented and dysfunctional H&S regulatory environment, the significance and impact of the less emphasised enhancing attitudes are shown. This contributes to bringing out the qualitiveness of the current study.

Table 10.1: The attitudes of contractors towards H&S self-regulation: Source: The author's fieldwork

Optimum H&S self-regulation Constraining attitudes	Optimum H&S self-regulation enhancing attitudes
Unorganised/incomplete	Primary
Secondary	Tick-box
Tick-box	Accept H&S responsibility
Irresponsibility	
Camouflage	
Context-defined	

In this discussion, it can be seen that indigenous contractors are grossly characterised with optimum H&S self-regulation constraining attitudes. Their understanding of the imperativeness of H&S is questionable, as can be seen in Section 7.5 and below. Based on Section 7.5, attitudes such as 'tick-box' and 'responsibility' have both enhancing and constraining effects (Table 10.1).

10.3.1 Optimum H&S enhancing attitudes of contractors

The strong commitment and good understanding of H&S is clearly demonstrated and evidenced in various places in Section 7.5, for example, the attitudes 'primary', and

‘responsibility’. Again, this gives some level of optimism considering the unfavorable contextual environment of Nigeria, which is characterised with a dysfunctional and complex H&S institutional and regulatory environment (Section 3.2), societal issues (Section 4.2.5) to name but few.

Responsibility (in Section 7.5.2) shows ‘bias in H&S regulatory responsibilities’, and ‘commitment in H&S regulatory responsibilities’; the latter is discussed here, Section 10.3.1, and the former in Section 10.3.2. A lot such as the good understanding of the benefits of H&S, moral positions and values for the employees can explain the commitment in H&S responsibility. Mohd Saidin et al. (2008) found that leadership is the most influential factor for developing a safety culture in construction firms. With strong leadership, dedication and setting examples, showing the employees that the organisation is into protecting their H&S, employees feel valued by the management, have a sense of belonging, hence encouraged to work safely. While this improved the relationship between employees and employers, it also improved H&S performance, the image of the employer, and increased productivity, to name but a few. It may also ensure consistency in the workforce, as few injuries and absence will be recorded. This is a good example of management commitment, which forms the statement of intent in the H&S policy statement (Hughes & Ferrett 2008). A member of management visiting sites (Section 7.5.2) also shows ‘arrangement’ another part of the H&S policy — how the organisation ensures that the aim and objectives in terms of H&S are achieved (Hughes & Ferrett 2008). That contractors take responsibility for the H&S of the employees and the public does not necessarily mean optimum H&S performance. It does not mean that the regulation of H&S will be unquestionable, as there are still concerns about the quality of regulation, for instance, in pure self-regulation (Sections 7.4.1, 10.2.1).

It is interesting to find that the optimum enhancing attitudes in the industry are not only reported in multinationals but also in indigenous contractors, especially, among SMEs who are NCSRCs (Section 7.5.4). The exceptional steps such as adopting basic H&S regulations show concern and care for their employees. The implications of this are no different from what is noted in the above paragraph. This is consistent with the femininity cultural dimension in the literature review, Section 4.3.1, where the femininity cultural dimension is characterised by care, peace and love. This cultural

dimension contributes to improving H&S. Similar commitment by SMEs in developing countries is also reported in Kheni et al. (2010). Kheni et al. (2010) found that SMEs adopt H&S management procedures for reasons such as family values; they also demonstrate the influence of the external family and the strong cultural values on H&S management in SMEs. While this is not the only reasonable explanation, (as Chapters 7 and 8 shows, for instance, location of firm), it debunks the widely held view that SMEs or indigenous contractors are not committed to H&S. Considering the challenges that SMEs/indigenous contractors encounter (see Section 4.6.3), their efforts toward H&S should be applauded.

Tick-box shows both enhancing and constraining contributions (Section 7.4.3). The enhancing aspect is discussed here and the constraining aspect in Section 10.3.2. H&S in the Nigerian construction industry is best described as emerging, hence considering its poor state, a 'tick-box' or 'checklist' approach may be very helpful in guiding the contractors. If contractors in a country where there are indications that a majority of the people in the industry do not know who regulates H&S (Diugwu et al. 2012), it is highly unlikely that they have adequate knowledge of how to comply with H&S laws/standards. A 'tick-box' guide makes self-regulation easier and encouraging for the contractors, especially in a country where there are excessive H&S regulatory approaches.

10.3.2 Optimum H&S Constraining attitudes of contractors

A lot of the attitudes show the lack of understanding of the imperativeness and benefits of H&S and its regulation to organisations and their environment. As a result, the lack of commitment shown in various places in Chapters 7 and 8 are inevitable.

Contrasting the attitude 'commitment in H&S regulation responsibility' in the preceding Section, 10.3.1, is the 'bias in H&S regulation responsibility' shown in Section 7.5.2. The 'bias in H&S responsibility' appears to be mostly dominant in indigenous contractors; this does not mean that indigenous contractors do not take responsibility of the H&S of their employees as can be seen in Section 10.3.1. In the current study, there are strong and widely held views that H&S is for the large contractors or only contractors that work in the oil and gas sector (Section 7.5.2). As a

result, contractors outside the aforesaid scope do little or nothing to ensure the H&S of their employees. Those that do little or just above little will not be committed; this explains the attitudes 'secondary', 'convenience', 'unorganised'. The innovations in H&S management, which contribute to better and easier H&S management and practices, may be far-fetched. All in this paragraph do not show management commitment. The imperativeness of ensuring that the people at the helm of affairs of organisations take reasonability of H&S is emphasised by the H&S policy statement of intent (Hughes & Ferrett 2008).

In some other SMEs, there is the bias against casual workers in H&S self-regulatory activities for reasons such as cost, another exhibition of the poor understanding of the imperativeness and benefits of H&S (Section 7.5.2). Some contractors view that investing in permanent staff will have a long-term benefit as against the casual workers who will have a short orientation. This can be explained by cultural dimension, long-term orientation, where the focus is on what is beneficial for the future overlooking the short-term aspect (Section 4.3.1.1). Understandably, in many construction sites and SMEs, SMEs depend on casual workers to carry out construction activities; the medium of employment is usually informal and/or for a short period of time. Insurance does not cover the casual workers, as in most cases they are employed on construction sites, and there is no paperwork or documentation of the workers. As a result, employers do not view the casual workers as their responsibility. The SMEs may not find it cost-beneficial to invest in these casual workers in the form of providing them with PPE, H&S training to name but few.

The casual workers in construction firms (in the foregoing paragraph) are responsible for their H&S (cf. Windapo & Jegede 2013). The casual workers do not know their rights under the Employees Compensation Act 2010 noted in Section 3.2.2.2. The aforesaid act covers both casual and permanent staff, whether in formal or informal employment, whether on a part-time basis, fulltime, temporary to name but few. If there is adequate awareness and the employees are aware of their rights, with the help of NGOs such as the H&S crusader covered in Section 7.4.5 and Section 10.2, employees who cannot afford lawyers may be able to sue their employers. The results in Section 7.4.5 suggest that the H&S crusader is likely to help in such a situation. With the adequate level of awareness, some employees may privately take their

employers to court. The legal system, which is characterised with long duration cases, may frustrate the prospective prosecutor.

Most interesting and significant is the attitude ‘camouflage’, showing a high level of deceit, lack of understanding of the benefits of H&S and unethical practice. Again, a good understanding of the imperativeness and benefits of H&S will go a long way in addressing this attitude. It is crucial to H&S that clients or the industry prequalifies contractors before inviting them to tender or that there are prerequisites for working in an industry or that H&S records are factored in prior to the award of contracts to contractors. This is because while the aforesaid in the preceding sentence contribute to improving H&S, it also encourages the contractors with good H&S records; it also makes contractors with a poor H&S record consider improving on H&S. Of concern in the current study, is the suggestion that SMEs (indigenous contractors) are more responsible for unethical practices such as falsification of documents so as to win contracts (Section 7.5.5). This is consistent with the literature review where corruption and unethical practices in the industry are covered in detail in societal issue Section 4.2.5. Analogously, the study of Oyewobi et al. (2012) on unethical practices in the Nigerian construction industry ranks ‘collusion of bidders’ and ‘developing strategies to securing the contract’ highest of all the factors examined (Severity Index (SI)=84%), while ‘bribery’ as a means of securing contract is ranked third (SI=78%). Unethical practice — making false claims is ranked the lowest (Oyewobi et al. 2011). Corruption highly hinders economic development in Nigeria, including the construction industry and improvement of strategies/policies/regulations such as H&S regulations (Idubor & Osiamoje 2013; Ogbeyidi 2012; Oyewobi et al. 2011; PRS Group 2010; Umeokafor 2014a). Out of the thirty-five contextual factors that influence H&S practices that Umeokafor (2015b) has identified and assessed, corruption at various levels ranks among the first ten factors. From Section 4.2.5, it can be seen that corruption is more like a norm in Nigeria, prompting Umeokafor (2015b) to conclude that it has been redefined.

While Multinationals are no exceptions to ‘camouflage’, as the Section 7.5.5 indicates that they use negative strategies too, it also evidences that the large contractors exploit the dysfunctional regulatory environment of Nigeria. This observation is aligned to the position of authors, for example, Umeokafor et al. (2014a) and Watterson (2006),

who note that large firms may even take advantage of countries with weak trade unions and poor H&S regulatory systems, locating highly hazardous industries in these areas. In agreement, these large firms may have safety programmes just on paper with the employees being unaware (Koehn et al. 1995).

The H&S constraining aspect of the attitudes 'tick-box' in the current study is consistent with the literature, for example, Section 3.3.2 which shows the understanding of mentioning H&S procedures in contract documents but in reality, H&S is low on the priority list hence secondary to the contractors. A further implication of this aspect of 'tick-box' is that the contractors would have a wrong understanding of what makes compliance with H&S in that once the requirements for a regulatory approach is confirmed by inspection, then H&S is achieved.

The understanding of the attitudes of indigenous contractors is further advanced by the theme 'secondary' where it shows that they have a reactive understanding to H&S and H&S does not appear to be high on their priority list (Section 7.5.6). Consequently, the attitude 'convenience', the H&S constraining aspect of the attitudes 'tick-box', 'enforced' 'reactive' and 'responsibility' contribute to this theme (Table 7.5). Understandably, it is clear that the challenges that SMEs (indigenous contractors) face compared to what the large contractors face create a gap between the two categories of contractors, making SMEs prioritise staying in business to ensuring H&S (Section 4.6.3). Diugwu (2011) found that complexity of H&S legislation, inadequate level of details and knowledge of the implications of H&S legislation, and lack of finance to be among the factors that hinder H&S management in SMEs.

This section explains why the attitude that H&S self-regulation can be 'unorganised/incomplete' (Section 7.5.1). The attitude that H&S self-regulation is context-defined/based is a product of the complex H&S regulatory environment of Nigeria (Section 7.5.1). There are indications that context-defined/based attitudes may result in the low quality of H&S.

10.4 CURRENT REALITIES OF THE KEY FACTORS OF H&S SELF-REGULATION

Figure 8.1 shows a summary of the direct (primary) and indirect (secondary) factors and how they interact. These secondary factors are products of the cultural, political, social and institutional environments and the interactions are not only among the primary factors and secondary factors but also among the secondary factors. These factors are not independent (Giuliano & Linder 2013; Gonzalez-Benito & Gonzalez-Benito 2006). While these interactions are expected, it is unexpected that in spite of direct determinants in the business cases, the economic environment has not made a theme. However, some issues relating to the economy such as unemployment, poverty are well covered in the social environment, but there is no evidence of their influence on the regulation of H&S in the study. Understandably, the factors in business case are based on the understanding of the contractors of the benefits of H&S and not really about pure economic environmental factors such as inflation, interest rate, and employment. Also, it is unexpected but revealing that there was little or no evidence of contextual factors directly influencing some direct factors of construction H&S regulation not limited to quest for economic gain, survival in business, active economic motivation (Figure 8.1). One of the possible explanations to this may be because the economic environment has not made a theme. Above all, the influences of most (if not all) secondary factors on the CSRCs, NCSRCs and Non-SRCs (but understandable differences) are evidenced in the results and discussed in this Chapter.

10.4.1 Key secondary factors of H&S self-regulation

It is evident in Figure 8.1 and Sections 8.4.1–8.4.4 that the role of secondary factors, in other words, contextual environments, are fundamental and inevitable to understanding and explaining the current realities of the factors of H&S self-regulation. This is consistent with the literature, for example, Sections 1.1, 1.3, 3.3.1, and 5.2.2. In addressing the H&S issues in the developing countries' construction, the environment the contractors operate in should be well understood because the contractors are susceptible to these environments (Ayers & Braithwaite 1992; Danso et al. 2015; Kheni 2008; Kheni et al. 2007). Addressing issues without factoring in the contextual environment has contributed to the H&S issues in Nigeria. For instance, a lot of the laws and standards adopted from developed countries are unimplementable in Nigeria (Aniekwu 2007) and enforcement is difficult (Dabup 2012).

Self-regulatory factors in the institutional environment

There is no evidence in the results that this impacts differently on various categories of contractors, multinationals and indigenous. The presence of multiple parties in terms of administering H&S with overlapping responsibilities in Ghana is reported in Kheni (2008). He goes on to show its negative implications in the administration of H&S, as H&S requires an effective and adequate structure for implementing H&S standards. This accords with the results of the current study. For example, Sections 8.4.1 and 7.4.2 show that in Lagos state, parties such as LSSC, Lagos State Building Control Agency, among many, Ministry of works and infrastructure administer H&S in Lagos. It also shows that they have local H&S laws for the state, Lagos. Further, the roles of other parties whose activities overlap into the construction industry or those with other safety responsibilities such as COREN and NESERA are also noted in Section 7.4.2, in agreement with the literature (Section 3.2.1). The implications of the foregoing are not limited to unclear and inconsistent and bureaucratic regulatory process (Section 8.5.7.3). It will be very challenging if not impossible for all the parties in the preceding paragraph and in Section 3.2.1 to work together without conflict of interests, increasing the cost of compliance, unclear lines of communication among the parties and between the parties and the contractors. When the institutional arrangement is straightforward and under a few regulatory actors, if not one establishment, the source of information, and level of complexity and overlaps in responsibilities becomes less.

Nigeria lacks adequate H&S laws as can be seen in various places in the results, for example, Sections 7.4.2 and 8.4.1. This is demonstrated in Section 3.2.2 where some discontents of H&S laws in Nigeria are shown. No matter how the self-regulation in Nigeria is lauded, adequate H&S laws remain imperative in the regulation of any society or activity. It is strongly evidenced in this thesis that inadequate H&S laws appear to be a major barrier to H&S practice on project. Admitted that adequate laws is one thing and its regulation (for which the literature shows that Nigeria lacks the capacity) another, it can be argued that if there are adequate H&S laws, the state of H&S in the construction industry will be improved. If there are laws to hold companies responsible, civil actors as seen in H&S crusader-led regulation may be more effective. Lack of adequate H&S laws, and everything in the preceding paragraph impacts on other secondary factors such as H&S awareness and H&S

culture (Section 8.4.4.4). It also results in a complex and multiplex regulation of H&S as noted in various places in this chapter and in chapter 8, for example, ineffective self-regulatory effects (Section 8.5.7.3).

Significantly, the dysfunctional H&S regulatory environment is also fueled by the poor legal system in Nigeria (see Section 8.4.1). Again, if there are better H&S laws and the legal system remains the same, of what effect would it be? The following mirror the legal system of Nigeria. While legal aid may be available to assist construction workers (who are on low wages hence cannot fund court cases), it is not practically available and the level of awareness is low. The court cases are lengthy, increasing the cost of the legal proceedings and even discouraging prosecutors. As H&S cases come both under criminal and civil cases, the burden of proof for the criminal cases will be beyond all reasonable doubt, one starts to think about the cost and how the evidence will be gathered considering the lack of resources that state actors in Nigeria already face (Umeokafor et al. 2014b).

Self-regulatory factors in the socio-religious environment

Literature review emphasises the religiousness of Nigerians and its influence alongside superstitious beliefs on the attitudes and practices of construction contractors in terms of H&S with unfavourable implications (Section 4.4). Nigerians assume that religion can excuse a lot of their unsafe attitudes and practices; they view that once the supernatural is there, their efforts to H&S are inconsequential. In the results, the religiousness of Nigeria is seen in its influence with unfavourable outcomes on CSRCs, NCSRCs, Non-SRCs (indigenous & multinational contractors) in implementing internal standards (Sections 8.5.5.4 & 8.4.4.1), but only in NCSRCs and Non-SRCs (indigenous contractors) in the procurement process (Sections 8.4.4.1). Faith in the ability of the supernatural to address all issues related to man is clearly translated or exhibited here. The H&S responsibility is shifted to an external party, the Supernatural in this case, resulting in little or no actions in terms of H&S (see Section 8.4.4.1). This can be explained by the external locus of control where individuals believe that a higher power (e.g. the Supernatural) is responsible or controls what happens to them, including in terms of H&S (Debnam et al. 2012). In highly religious societies of which Nigeria is one, as literature review shows (Section 4.4), Debnam et al. (2012) argue that the spiritual locus control construct is relevant.

The external locus of control sits against the internal locus of control where individuals believe that their ability, efforts and actions can determine what happens (cf. Debnam et al. 2012). Without debating the correctness and implications of the above, it can be argued that humans may have roles to play in spite of their beliefs and/or the roles and ability of the supernatural.

Conversely, scholars have examined the position of religion in the society and its potential, concluding and evidencing that religion can contribute to improving H&S. For instance, Pukenis (2014) in Section 4.4 points to the ability of religious leaders to improve H&S through their teachings. Likewise, Umeokafor (2015b) acknowledges the potential of religion in improving H&S. This is in agreement with the results of this study where the respondents agree that education at a social level through religious leaders can contribute to improving H&S awareness in Nigeria (Section 9.3.3). Religions in Nigeria preach peace, love, care, kindness, inter alia, responsibility. Kheni (2008) while relating his findings (where older workers look after younger ones) to the religiousness of his respondents, attributes the aforesaid teachings to traditional religion, which is consistent with Hofstede's femininity cultural dimension. Consequently, moral arguments for improving H&S can be based on the teachings of religion.

Like many countries, the level of insecurity where the police are unable to adequately protect the citizen remains another social issue that impact on H&S regulation (Section 8.4.4.2). The police complain of no equipment to fight crime and sabotage in the force. Even when the police apprehend lawbreakers, prosecution may be far-fetched because of the legal system issues and high level of corruption (Sections 10.4.1 and 4.2.5). In addition to kidnapping (Section 4.2.5), 'Boko haram' a terror group, continues to cause mayhem in the North East of Nigeria. The security of law enforcement officers remains at risk. In 2003, an assassination attempt was reported on the then Director General of the National Agency for Food and Drug Administration, the Late Prof. Dora Akunyili. Of all the 35 contextual factors assessed by Umeokafor (2015b), insecurity ranked fourth in terms of influencing H&S practices in Nigeria. If this is the case, the uncontrolled activities of communities in community-led self-regulation, Section 10.2.2, and the insecurity of the state regulator in Section 8.4.4.2 may be explained. Drawing on the foregoing,

how will offices with industry regulatory or administration roles be effective if their securities are not guaranteed?

For H&S to improve, the populace should be aware of what H&S entails, the benefits, their rights and the implications of poor H&S. This will contribute to creating a positive safety culture that is described in Section 4.3.3. In addition to the evidence of the low level of H&S awareness in the industry (Section 10.3.1), Table 5.1 shows that the lack of awareness influences compliance in terms of H&S (Otham 2012), and even outside H&S, for example, Sarkheyli et al (2012). The literature review goes on to show that lack of understanding or risk in work activities contributes to poor H&S practices in the Nigerian construction industry (Belel & Mahmud 2012 in Section 4.3). In the current study, all multinational and indigenous contractors in the industry are found to experience the impact of the low level of H&S awareness and safety culture in the country in their organisations, but with a difference in occurrence (Section 8.4.4.4). Typically, the experiences of CSRCs are outside their firms, the communities, — external; the experiences of NCSRCs are external but in the supply chain, the clients; the Non-SRCs from workers and clients (that is internal and external). A lot, for instance, the structure advantage, power relationship and scope of operation, can explain these differences. These are discussed in detail later in this chapter. Moreover, the dysfunctional and fragmented H&S regulatory environment in the institutional environment influences H&S awareness (Figure 8.1; Section 8.4.1).

Money culture is discussed in Section 10.3.2 and in the literature review (Section 4.2.5) demonstrating unethical practices at best and bribery and corruption at worst, the ability of money to address issues and how normative this has become. The results in Section 8.4.4.5 accord with the aforesaid as bribery and corruption norms result in unethical practices in procurement and regulatory activities or regulatory agencies. Corruption in the public and private sectors are discussed in the literature showing a general understanding that embezzlement of public funds is a ‘national right’, but likely to be higher in the public sector (Maycook 2009 in Section 4.2.5).

The social status of an individual or an organisation in the society makes a way for them; it determines how they are treated. The people in the higher echelons of the society can influence the regulatory activities of organisations (Section 8.5.7.1). This

means that the regulators may be biased while carrying out their activities because of the political influence or social status of the regulated (Section 8.5.6.2). Power relationship and the regulatory case where the latter two stem from are discussed in detail later in this chapter (Section 10.4.2).

Self-regulatory factors in the political environment

Regulatory institutions need to be independent of political influence. They need not work with the fear of politicians or people in the higher echelon of the society. With this, they are able to work effectively. Sadly, this is not the case in Nigeria. Results of the study show that the political environment produces two significantly influential factors (political institutions and governmental structure, and political influence) that impact on direct factors, in the regulatory case (e.g. low threat of regulation, ineffective regulatory regime, bias in regulation and control) (Figure 8.1; Section 8.5.7). It goes on to significantly impact on dysfunctional and fragmented H&S regulatory environment in the institutional environment and power relationship. The implications of these impacts and how they occur are presented in Section 8.5.7.2 where the security of inspectors from regulatory agencies is at risk, and the regulatory process is biased by political influence. Politicians in Nigeria have the powers to break rules and get away with it. The literature review shows that the political environment in Nigeria is characterised by unethical practices. Literature (Section 4.2.3) also shows the power status in the society indicating the powerful and the less powerful; this can be related to what occurs in the political environment of Nigeria.

Further evidence of the political environment is reported in terms of lack of governmental and political attention towards H&S; there is no evidence that the influence on the categories of contractors is any different. The lack of governmental attention to H&S is demonstrated in many ways. For example, the Labour, Safety, Health and Welfare Bill of 2012, which was revised in 2016, has not been passed into law. The bill was approved by the Senate as at September 2012 and is still awaiting presidential assent at the time of writing this thesis. The poor state of H&S in the country makes it a crucial issue but the government appears not to view it as so. While it may be possible that some industries will effectively self-regulate themselves without governmental influence or contribution, this may be challenging in terms of construction H&S, as can be seen in various places in this thesis. At least, there

should be adequate H&S laws, whether developed by the state and enforced by the industry and state or developed and enforced by the industry but with state backing. Also, as earlier noted, as H&S involves civil and criminal laws, there is the need for H&S statutes. Countries with improved H&S records and regulatory systems have H&S laws that back the regulatory framework, for example, the Health and Safety at Work Act of 1974, which the HSE and local authorities in the UK enforce.

Self-regulatory factors in the cultural environment

There is evidence of a collectivist cultural dimension in the results that remains significantly contributory to explaining self-regulation, both in terms of approach and direct determinants. This is where the extended family system manifests through family values resulting in sentiments in decision-making (Section 8.4.2.4) and where the community is able to work together through perhaps village representatives in community-led regulation (Section 8.4.2.1). In terms of community influence, it has been discussed elsewhere in this chapter, community-led H&S self-regulation, where the influence of the community on H&S regulation is noted. It is also covered in the literature review where the collectivist cultural dimension and community leadership features of Nigerian communities are covered (Section 4.5). For family values, this was found to mostly occur in indigenous contracting firms (SMEs-NCSRCs), according to Section 8.4.2.4. The results show family values resulting in sentiments in decision-making, which in turn negatively impact on procurement practices (Section 8.4.2.4). This is in agreement with the literature review where the influence of family value on H&S is reported (Kheni et al. 2007 in Section 4.5). Windapo (2013) also found evidence that non-compliance with H&S laws can be indirectly attributed to the cultural backgrounds of construction workers. Inference can be made from Section 8.4.2.4 that a possible explanation is because of the collectivist cultural dimension of the management of the indigenous contractors. This suggests that the organisational culture of the indigenous contractors was influenced by the national culture, as the members of management are Nigerians. The literature review shows that organisational culture is susceptible to national culture, but this is subject to the characteristics of top management in organisations (Section 4.3.2). Nonetheless, it can be concluded that there is no evidence in the results that the cultural environment in Nigeria has only significantly influenced indigenous contractors in terms of collectivism and not multinational contractors.

Additionally, the results show no evidence to conclude that the ‘Nigerian factors’, reactive culture in Nigeria, lack of follow-up culture, and the ‘culture of abandoning projects or policies’ influenced the organisational culture of the contractors (Section 8.4.2.3). There is rather evidence that ‘Nigerian factors’ resulted in poor client attitude, inadequate governmental and political involvement in H&S and inadequate H&S laws. These factors, in turn, impact on contractors as established in various places in this chapter. Notably, the level of consensus (between the multinational and indigenous contractors) on ‘Nigerian factors’ remains significant.

10.4.2 Key Primary factors of H&S self-regulation

Counterproductive regulation and activities

The literature review covers counterproductive or low performing regulatory strategies or approaches. For example, command and control is demonstrated as grossly riddled with limitations in Section 2.4.1. Typically, the government and or regulators may be overburdened regulatory-wise (Aalders & Wilthagen 1997). It can result in over-dependency on regulators and may be unable to deter or identify one-off actions of non-compliance (Fairman & Yapp 2005a). This regulatory approach has underperformed and is counterproductive, resulting in other regulatory approaches which are flexible, for example, self-regulation. Even in H&S self-regulation, the literature review in Section 2.4.2.4 shows that it has underperformed if not failed in manufacturing industry in New Zealand (Walls & Dryson 2002). These are all under less complicated and in controlled regulatory environments.

Significantly it emerged that in an uncontrolled and complex regulatory environment as evidenced in this thesis, the regulation of H&S can be counterproductive. The results in Section 8.5.7 shows bias in regulation both at internal organisational level and in the regulatory activities of organisations with H&S regulatory/administration responsibilities or those whose activities cut across aspects of H&S in the construction industry — state actor level. These biases in regulation, in turn, make the regulatory activities to be counterproductive.

Internally in organisations, the exclusion of casual workers (who can be subcontractors) is as a result of long-term and short-term cultural dimension from the

social environment (Section 10.3.1). This shows the rational and calculated behaviour underpinned by economic or business benefits. This occurs because, among many, construction workers do not know their rights, as earlier discussed in Section 10.3.2.

The casual workers who are not included in H&S issues will have a low sense of belonging and morale, resulting in the workers' attitude described in Section 8.5.5.4. However, it is unlikely that there will be a positive outcome on the inclusion of casual workers in the H&S programmes of organisations if they are viewed as temporary, as the ideology is passed to the workers. These workers may see little need for a strong involvement and commitment to H&S programmes, as they are temporary employees. As earlier noted, the implications of poor H&S practices by subcontractors are covered in the literature, for example, Manu et al. (2013).

At state actor level, societal issues, bribery and corruption, social status in the social environment, and political influence in the political environment account for the bias in regulation. Hence, contractors view them as illegitimate and unfair. The average Nigerian does not have faith in law enforcement officers because of corruption. The literature review shows that the activities of the regulator where the punitive measures are viewed as unfair remain one of the explanations of poor compliance behaviours (Priyadarshini & Gupta 2003 in Table 5.1). Just like fishers in Denmark, if contractors are not part of making the laws, they will view the laws as impossible to comply with in the real world (Nielsen 2003). The explanations for issues such as nature of laws, enforcement strategy (targeted enforcement) have been discussed in Mandatory/Enforced H&S self-regulation in Section 10.2.1. The absence of flexibility in regulatory style remains one of the explanations for poor compliance (Priyadarshini and Gupta 2003 in Table 5.1). This is where a command and control approach obtains, and again suggests counterproductive regulation.

The inconsistent and complex regulatory regime under self-regulatory effects in Section 8.5.7.3 leaves contractors with less structural advantage in terms of finance and expertise disadvantaged, as the results of the study shows, yet another counterproductive effect. Being certified for all projects which require a different certification would be expensive and time consuming, limiting the chances of the less advantaged to compete. Similar issues are already discussed in Section 10.3.2 where

SMEs are always disadvantaged in terms of H&S; recall that most of the NCSRCs are SMEs but all are indigenous (see Table 7.1). In other words, the more advantaged a contractor is in terms of structure, the more they are able to self-regulate and withstand the negative implications and influences of the contextual environment. This results in structural advantage, Section 8.5.5.8; this is where there is compelling evidence that the size of contractors (which entails more access to funds, projects, resistance power (Section 8.5.6.1) is an advantage in terms of H&S regulation. Also see Section 8.5.8.2 where the economic case for SMEs struggling to self-regulate is demonstrated.

The premise established in the preceding paragraph contributes to emphasising the imperativeness and advantage of a more structured, controlled and well thought-through H&S regulatory regime. Considering the state of H&S in Nigeria and its environment, the regulation of H&S may thrive in a system where the H&S laws and regulatory framework or regime are backed by statute. When statutes —adequate contextualised local H&S standards — do not back the activities of non-state actors the non-state actors can do little. The debate on the most appropriate party to set policies which literature review reveals is presented in Section 2.6.1. The involvement of the industry in the creation of the policies does not only give them a sense of belonging but ensures their participation with workable compliance requirements and enforcement techniques (Nielsen 2003). This may also include providing a regulatory platform that will include non-state actors, but not in the current form. For instance, an arm in the industry in conjunction with NGOs can carry the assessment of contractor H&S competence. There can be an educational assessment system, which helps in meeting the training criteria for H&S knowledge for working in the industry; this can also be the responsibility of another arm in the industry or NGOs. Above all, the foregoing may address some barriers that the study reveals, such as excessive external involvement, the lesser powers that the non-state actors, ineffective regulatory regime (including lack of adequate H&S laws) found in the current study (Sections 8.5.7.2–8.5.7.3).

Equally important is the low threat of regulation due to the bias in regulation at state level and social environment issue, bribery and corruption, which is counterproductive to the regulation of H&S, as the results reveal (Section 8.5.7.4). A

rationale for enforcing and monitoring standards through external actors is to instil regulatory threat, but as the results reveal, the aim is defeated. Priyadarshini and Gupta (2003) show that weak enforcement (where enforcement appears to fulfil all righteousness) accounts for poor compliance because the threat to regulation is low.

Furthermore, Priyadarshini and Gupta (2003) show that over-ambitious standards do not provide the incentive to the regulated in India to comply with the laws. They note that the laws are out of date and that inadequate enforcement hinders compliance (Priyadarshini & Gupta 2003). This is also consistent with Arimah and Adeagbo (2000) in Table 5.1. In other words, the laws are counterproductive. The results of the study are consistent with the aforesaid in that inadequate H&S laws means that H&S laws are adopted from other countries and are counterproductive. Using these standards in Nigeria suggests a kind of over-ambitious understanding, as they are not contextualised to Nigeria. While CSRCs can afford to 'get on with the laws', Non-SRCs and NCSRCs tend to feel the impact more, as they cannot afford the financial implications of adopting the laws, for example, employing the services of experts in the improvement and implementation of the standards. The inadequate laws result in multiple H&S regulatory approaches, which as seen is counterproductive.

Power relationship: resistance and influencing powers

This is reflective of the power distance cultural dimension covered in the literature review, Section 4.3.1.1, where the power status in the society is covered — the powerful and less powerful in the society. Hofstede (2001) found that West African countries, including Nigeria, have a high power distance compared to the UK. Further, the H&S self-regulation analytical framework shows the calculated or rational behaviours of contractors where their level of influenceability in the society is one of the determinants of H&S self-regulation (Section 5.3.2.2). This occurs as a result of financial influence and resistance to regulatory activities due to social status or political influence, suggesting only negative influence. While the negative influence is consistent with the results of the current study, the current study shows the positive encouraging manifestation of power relationships. This is where the resistance powers of contractors in exploiting their structural advantages and/or their political power is to the benefits of H&S (Section 8.5.6). This finding is opposite to

the expected results considering the negative features of the social and political environments of the contractor, for example, abuse of political power.

Furthermore, the evidence in the resistance powers of contractors in the preceding paragraph strongly shows that it mainly occurs in large contracting firms, but very little evidence relates it to SMEs who engage in oil and gas projects (that is CSRCs).

These SMEs have a standard and reputation to maintain because of the industries they operate in; they also have the structural advantage like the large contractors. Thus, the quest to maintain standards, which strongly inform all their activities, makes them stand out in their groups, and clients are pre-informed of the positions of these contractors. The results in Section 8.5.6.1 indicate good ethical practices by these contractors.

The results reveal that the negative aspects of power relationships manifest in two ways: resisting regulatory efforts, and financially influencing the activities of the regulator, all showing a conscious effort not to self-regulate (Sections 8.5.6.2–8.5.6.3). There is no evidence to associate this with CSRCs, but plenty of evidence to associate it with NCSRCs and Non-SRCs. In terms of resisting regulatory efforts, again, the social and political environment is evident here, where some contractors exploit their social status and political power to render the regulator efforts unfit for purpose. The results ‘state actors: inability to effectively regulate’ in ineffective regulatory regime corroborate this (Section 8.5.7.2). This is where the social status, political influence and insecurity of inspectors result in ineffective and poor regulation. The literature review reveals the high level of human insecurity in Nigeria, for example NHDR (2015). Okojie (2010) and Watterson (2006) report the insecurity of H&S inspectors who are molested while carrying out their duties.

Issues of corruption are covered in various places in this chapter, for example, Sections 10.3.2, 10.4.1, and in the literature review, Section 4.2.5. The political and social environments point to corruption and political influence as norms in Nigeria. If this is the case, and contractors are able to ‘pay their way’ through the regulatory activities, self-regulation would be a choice. This is based on the results of the current study: field inspectors from the regulating or administering authorities compromise regulatory activities because of financial influence — bribery from the contractors.

Hence, the field inspectors will see this as an avenue to enrich themselves, defeating the aim of regulation. These contribute to the ‘unethical practices’ below.

Unethical practices

What are described as unethical practices at best and corrupt practices at worst, have been noted and discussed in various places in this chapter, as it is well emphasised in the results and in literature. Hypothetically, if all factors are addressed except corrupt and unethical practices, and vice versa, will there be optimum H&S regulation? Considering the findings of the literature review, it is unlikely that all the barriers to self-regulation will be addressed without first addressing corruption. In other words, addressing corruption remains a significant factor in addressing H&S issues. The literature review demonstrates that corruption is rooted in the high places of authority and has been so for so many years (Section 4.2.5). Literature review and Section 10.3.2, Optimum H&S constraining attitudes of contractors, also demonstrate that unethical and corrupt practices transcend to the populace, including the construction industry. The extent that unethical procurement practices occur in Nigeria remains an issue of concern (Oyewobi et al. 2011). Oyewobi et al. (2011) observe the significant relationship between corruption and all stages of project execution. Worse still, corruption is wrongly perceived as essential to the industry in some studies (Oyewobi et al. 2011).

In the current study, the picture that the social environment portrays is that corruption may be viewed as a norm. Of course, the report of corrupt and unethical practices in various places in this thesis goes on to support the inference from the results of the current study on the implication of unethical and corrupt practices for H&S. The results show that in addition to the bribery and corruption report above, in power relationships, it manifests in the procurement stage, the attitudes of stakeholders in the industry, the regulatory activities of state actors, inter alia, community-led regulation (Sections 8.4–8.5). Indeed, there is no evidence of CSRCs engaging in unethical practices in procurement, leading to the compromise of H&S (Section 8.5.5.3). As CSRCs tend to already have all in place for H&S regulation and management and a structure that gives them various advantages in the industry, if they engage in unethical practices, it may not compromise H&S self-regulation. That H&S ‘takes the hit’ in the event of financial cuts in the construction process emphasises the attitude,

‘secondary’ (Section 10.4.1); the H&S aspect of the contract document (if included) become a ‘tick-box’. The client, a public client or private client but not an individual, may lack the boldness or the ability to insist on H&S, as they have compromised their positions.

That wrong motives among some members of the community as regards community-led regulation where they seek to enrich themselves under the guise of ensuring that contractors self-regulate is yet another exhibition of money culture, a social contextual factor. That this happens in a complex and uncontrolled regulatory environment is not unexpected where the social environment is riddled with insecurity; illiteracy, poverty and unemployment; poor H&S culture, low level of H&S awareness to name but a few (see Section 8.4.4). This, in turn, provides an avenue for contractors who want to compromise H&S to exploit the opportunity. This may not be the case for CSRCs because of their structural advantage, but may be different for NCSRCs and Non-SRCs. By implication, the cost of construction will increase. It also goes on to advance the poor understanding of what H&S and compliance are about.

Furthermore, the results show ‘contractor exploitation’ by some communities under the guise of complying with the Local Content Act 2010 which is beneficial to some contractors but a burden to some (Section 8.5.5.4). The training of the locals by some contractors contributes to empowering the locals, of course, introducing or creating H&S awareness in the process. It is likely that some of the locals trained by these contractors will make a living and possibly progress in the trade or profession. It is vital to note that the industry already lacks skilled personnel, as the literature review shows in Section 4.6.3. Above all, the foregoing shows the geographic difference as it is emphasised in the Niger Delta region. This also shows ‘contractor exploitation’ and ‘enrichment’ (Sections 8.5.5.4).

Influence of scope and characteristics of operations

It should be recalled that literature review reveals that geographic locations, demography, determine self-regulation, for example, Table 5.1, Section 5.2.2. In a study of compliance and legitimacy of fisheries management in Denmark, Nielsen (2003) presents a framework for analysing the aforesaid. Among the factors identified

in the framework are geography and demography, which are under industry structure (Nielsen 2003). This can be explained by the diverse and various fishing locations and communities. The literature review goes on to support geographic location and industry structure influence on self-regulation in Gonzalez-Benito and Gonzalez-Benito (2006) (Section 5.2.2). The results show in Section 8.5.5.7 that irrespective of the size or ownership structure, contractors must self-regulate once they work: in a particular geographic location, Lagos state or Niger Delta; industry, oil and gas, telecommunication; for certain clients, DFID, World Bank, Central Bank of Nigeria, Nestle; in some high-risk projects. This, of course, excludes Non-SRCs. Construction activities in the aforesaid scope are likely to be self-regulated. This can explain the inadequate client involvement (Section 8.5.5.2) where there is more client involvement in big projects where in most cases the clients have a higher level of H&S awareness. This skews self-regulation to the contractors or projects of the aforesaid characteristics. Although in Lagos State and Niger Delta, not all contractors will self-regulate, the likelihood of self-regulating is very high; the point of geographic location as a determinant is buttressed. In projects of the foregoing characteristics and/or scope, the contractors cannot resist self-regulation; it is among the criteria for involvement in the project. Although, there are reports of corruption, which results in ‘watering down’ H&S or the communities overlooking H&S, the ideal thing is to regulate H&S. There is higher level of coercion making contractors self-regulate, that is a higher level of H&S awareness. By implication, if the scope and characteristics are outside the above, self-regulation is less likely to occur.

For high-risk activities, it makes basic sense that it would involve a higher level of carefulness and possibly the adoption and implementation of safety standards to prevent incidents, as the results of the current study show. Drawing on a study (Windapo 2013) on contractors in the Western Cape Province of South Africa, it is possible that the degree of risk can drive self-regulation but the extent may be limited or less than other factors such as economic-related factors. Windapo (2013) found that the level of compliance of the contractors with construction H&S laws is related to the perceived cost saving and not the degree of risk. If contractors in the current study find themselves in an environment where the communities have the type of powers demonstrated in community-led regulation, it is unlikely that the contractors would do nothing in terms of safety. These contractors understand that even though they have to

work with the communities, fulfilling all they need, if there are incidents involving injuries or fatalities of the locals, the communities would request compensation. Alternatively, the employees who work in these high-risk activities may be insured privately or by the employers' insurance providers, they would have been trained on H&S and would have a better knowledge of H&S, including their rights in terms of the ECA of 2010. These may mean that they can take legal actions against their employers. The participants in CSRCs suggest that their employees or colleagues are trained in H&S and all are insured, as insurance is one of the grounds for getting contracts with large clients or contractors.

Structure advantage and ability to self-regulate

Some companies are at advantage as a result of many things, for instance, size of company, ownership structure, the areas of operations, expertise available in the company, political influence, and the availability of funds. As can be seen in various places, for example, Sections 4.6.3 and 8.5.6, the political powers of some companies are to their advantage; they use these powers to secure contracts, secure loans and even maintain status and standards in the industry. When there are limited companies with expertise to carry out some activities, the few companies with such expertise are respected in the industry and they have their ways in a lot. The level of competition is low and they are able to get clients to fund H&S if need be. These companies in most cases provide their employees with the needed training and insurance, as stated in the last two preceding paragraphs. Most of the arguments in the preceding paragraphs are replicated here, provided the points are advantageous to contractors. While many large contractors who are multinationals belong to this group, some SMEs are also in this group (Table 7.1). Indeed, most of the characteristics in this paragraph are consistent with all CSRCs; these characteristics may serve as a clear distinction between CSRCs and the two other groups, NCSRCs and Non-SRCs. According to the results of the study, CSRCs have the necessary means to self-regulate, as they are able to withstand political and social influence so as to maintain standards (Section 8.5.5.8). This is also demonstrated in various places in this chapter and Chapter 8.

Literature demonstrates that structure advantage contributes to explaining the compliance behaviours of firms, supporting the findings in the preceding paragraph. In particular, Christmann and Taylor (2001) assert that multinational firms' level of

self-regulation will be higher than that of their domestically owned counterparts. First, the multinational firms have a better ability to self-regulate in that factors such as knowledge, finance, and technology culture may account for this (Christmann & Taylor 2001). Second, multinational firms may get a higher level of international pressure (Christmann & Taylor 2001). Third, the benefits of self-regulation may also make multinational firms self-regulate more than their domestic counterparts in that they may understand better than their indigenous counterparts (Christmann & Taylor 2001). Similar the structural advantage of multinationals in Nigeria is also demonstrated in the literature review, again were multinational firms have advantages over SMEs, including in terms of H&S (Section 4.6.3); it is also reported in Gonzalez-Benito and Gonzalez-Benito (2006) in Section 5.2.2, emphasising company size. Analogously, showing financial advantage in terms of regulatory cost, Crain and Crain (2010) report that small firms spend 42 percent more than mid-sized firms and 36 percent more than large firms. The result of this study in supporting previous studies that structural advantage explains self-regulation (Section 8.5.5.8), goes on to debunk the points in Section 4.6.3 claiming that structural advantage is skewed to only multinational in terms of H&S evidenced. As earlier stated and shown in various places, some SMEs have a good understanding of H&S and its benefits thus constitute the CSRCs. They have similar structure advantage as multinationals do.

Structural advantage results in the ability to self-regulate, a driver in Section 8.5.9.3. This emphasises the rationale for presenting ‘ability to self-regulate’ as a stand-alone element of the analytical framework or a topical issue (Section 8.5.9); without the wherewithal to self-regulate, contractors will not self-regulate. CSRCs whose characteristics enable them to self-regulate are able to overcome most of the barriers to self-regulate, demonstrating the imperativeness of the ‘ability to self-regulate’. Justifications (with support from literature) for addressing ‘ability to self-regulate’ as a stand-alone topical issue are covered in detail in Section 8.5.9. For instance, the willingness to self-regulate is not enough, as can be seen in this chapter, thus should be emphasised in understanding compliance (Winter & May 2001).

The results show financial capacity as among the key factors that the willingness to self-regulate cannot overcome (Section 8.5.9.1). The contractors who are not CSRCs decried the financial constraints while CSCRs acknowledged them but do not view

them as stopping them from self-regulating. These financial constraints, which are also reported in ‘incompetence of workforce’ in Section 8.5.5, explain the inability of some contractors who lack the ability to keep casual workers in jobs for long. Also, it explains the lack of financial wherewithal of the aforesaid contractors to train new employees on H&S, affecting their ability to compete in the industry (including against CSRCs) and to self-regulate (Section 8.5.5.2). In the results, the cost of H&S is contested as an unacceptable excuse for SMEs to poorly self-regulate or even not to self-regulate (Section 8.5.9.1); authors offer possible explanation for the excuse. Arewa and Farrell (2012) argue that SMEs may be non-compliant with H&S legislation, as they see it as economically unimportant. They go on to adduce by demonstrating that SMEs’ spendings in relation to complying with H&S legislation is disproportionate to that of large firms. If some of these contractors who are not CSRCs are able to overcome the financial constraints, they are faced with internal organisational barriers such as ‘dissension’ and ‘sabotage’ within the organisations (Section 8.5.9.2). This suggests negative and secondary attitudes in these organisations. It should be recalled that the environments these organisations operate in have features unfavorable to H&S.

Legitimacy: regulatory framework and social-wise

The findings of the literature review show that the understanding of self-regulation determinants from a legitimacy perspective occurs in two ways. Firstly, the legitimacy of laws and the regulatory activities of state actors, for example, Akpalu (2011), Kircher et al. (2008), Laeeque et al. (2006), Nielsen 2003, Windapo (2013), Winter and May (2001), Yapp and Fairman (2004b). Indeed, the perceptions of the fishers of the enforcement activities — how fair or biased or cruel the activities are — determine how the regulated will perceive the regulatory system and the relationship between the regulator and the regulated (the fishers) (Nielsen 2003; also cf. Winter & May 2003). These go a long way in determining compliance (Nielsen 2003; also cf. Winter & May 2003). Although the foregoing studies centre on compliance with laws, a type of self-regulation, enforced H&S self-regulation, is a statutory requirement (Gracia Martinez et al. 2007; Havinga 2006; Hutter 2001).

Secondly, legitimacy explains self-regulation determinants from a social perspective, as literature review found (Section 5.3.2.2, Tables 5.2 and 5.3). Specifically, Giuliano

and Linder (2013) view social legitimacy as a feature of an organisation that is shaped by the actions and perceptions of the society. Here, organisations will self-regulate or comply with the law so as to be socially legitimate or increase its level of social legitimacy (Giuliano and Linder 2013; King & Lenox 2000; see Peterson & Diss-Torrance 2012; Winter & May 2001 for compliance with the law). As social legitimacy determines the survival of an organisation in the business community (Giuliano & Linder 2013), organisations may prioritise it; thus, this may be a principal determinant of self-regulation.

The results are in accord with the foregoing premise, as they show that legitimacy manifests in terms of regulatory framework and social-wise (Table 8.1; Sections 8.5.1 & 8.5.3). In particular, from the positive perspective, the client and the contractors strive to be socially legitimate, while from a negative perspective; the contractors view the following as illegitimate: the regulatory activities of state actors and the communities, and the existing local H&S laws. Further, that few clients do not want their images to be tarnished in the community if there are fatality records, which the community will understand from a superstitious perspective, is revealing (Section 8.5.1.1). While certain steps such as the local communities ostracising people with fatality records on their sites, hence tarnishing the image of clients may occur, the rate of occurrence may be very low. Even if clients are ostracised, to what extent does tarnishing the image of people negatively impact them, especially wealthy and influential people? Do the populace really care about the image the wealthy or influential people? The 2015 general presidential election in Nigeria saw the image of the winner of the election tarnished prior to the election, but of course, he emerged victorious. Similar issues are recorded in the US general presidential election in 2016 with the winner having sustained significant blows to his image.

From a contractor's image perspective, the little evidence in the results of few large contractors caring about their images more than SMEs (Section 8.5.1.2) is consistent with Laeeque et al (2006). Laeeque et al (2006) note that compliance with laws to gain the respect of the public highly make large firms comply with NHP regulations in Canada more than SMEs. They also report that large firms are more conscious of their images being tarnished, while SMEs are reported to be more fearful of the regulators' enforcement actions (Laeque et al. 2006).

Additionally, the finding that some contractors have no interest in ‘image protection’ locally, but rather would strive to protect their images internationally because of the economic implications is significant, interesting and evidencing globalisation influence (Section 8.5.1.2). Also, that indigenous contractors care about their image internationally is revealing, but also does not show regard for the local and undermines the respect and faith the locals have in contractors. The economic motivation for self-regulation, which underpins the quest of contractors to protect their images is consistent with literature, for example, Giuliano and Linder (2013), Levinson (1987). It is also covered in compliance literature, for example, Nielsen and Mathiesen (2003), Sarkheyli et al. (2012). The globalisation influence on self-regulation is covered in Christmann and Taylor (2001).

In the current context of social media and the global nature of business transaction, this is not surprising. The rate at which issues circulate in the social media, which has no boundaries, cannot be overemphasised. It is surprising that the social media has not been found to drive compliance in the current study. The media under social pressures was found not to live up to expectation, suggesting explanations for the lack of concern for social legitimacy locally (Section 8.5.2). This is discussed in the succeeding paragraph, social pressure.

In terms of legitimacy of the regulatory framework, normative judgment and/or motivation, Section 8.5.3, shows that some contractors do not view the activities of state actors and the local communities as legitimate because they consider some of their activities as unfair. This has been discussed in Section 10.2.1. On the other hand, some contractors view the local H&S laws, the Factories Act 2004 as illegitimate as it is riddled with flaws, thus they adopt standards from other countries.

Social pressure

Drawing on the literature, for example, Christmann and Taylor (2001), Giuliano and Linder (2013), Sutinen and Kuperan (1999), literature review found that social pressure or social motivation is a determinant of H&S self-regulation, but also covers it as a barrier or demotivator, (social pressure in Section 5.3.2.2). In the literature, social actors such as trade unions or association, communities, negative media, law suits drive self-regulation or compliance with the law. Conversely, social pressures

from fishers make compliant fishers become non-compliant (Nielsen & Mathiesen 2003). These non-compliant fishers perceive non-compliance with some pieces of legislation as moral as the pieces of legislation are perceived to be inadequate (Nielsen & Mathiesen 2003).

The results of the current study in being harmonious with the aforesaid literature show social pressure from the media, trade union/associations and communities. Social actors in driving H&S self-regulation, also fail to live up to expectation, thus demotivating contractors (Section 8.5.2.1–8.5.2.2). For the demotivators, that the media has failed to live up to expectation (whereas they are expected to report unsafe practices of contractors) has resulted in contractors acting with impunity. This explains the lack of concern for social legitimacy locally in the preceding topical discussion, legitimacy: regulatory framework and social-wise. The media may argue that H&S issues may not make a good read or news, thus are not worth reporting. In practice, the media is mainly run or controlled by the government or politicians. These politicians and the government are those that are demonstrated to have little or no interest in H&S in ‘legitimacy: regulatory framework and social-wise’ in this Section, 10.4.2. This may explain why the media seldomly report or oppose the action of the government on H&S.

However, for the drivers, the media occasionally plays a coercive role in H&S, as the results show (in Section 8.5.2.2). It is likely that if well harnessed, the media will be effective in improving and promoting H&S. They have served similar roles in the fight against Ebola in Nigeria.

Economic concept

Economic concept-related explanations for self-regulation remains a significant finding of the literature review, manifesting in two core ways, business case and calculated economic motivation (see Section 5.2, Tables 5.1 & 5.3, economic case in Section 5.3.2.2).

The Literature shows the business case (economic benefits), the quest to maximise profit or other economic arguments to self-regulation, for example, Giuliano and Linder (2013) or compliance with H&S laws (Windapo 2013). These activities in the

business case are aimed at profiting and can result in social legitimacy (Giuliano & Linder 2013). The results of the current study are in agreement with the aforesaid literature offering insight that contractors can take proactive steps in terms of self-regulation for economic benefits. The results in Sections 8.5.8.1–8.5.8.3 suggest the structural disadvantage of some contractors, NCSRCs and Non-SRCs. That some contractors who do not self-regulate are unable to withstand client pressure not to self-regulate remains a significant barrier to some contractors. The financial and economic burden that some contractors have to overcome remains significant; when some are unable to overcome, they compromise H&S because they need to stay in business. This is understandable, as they are an enterprise faced with the challenges from the external and internal environments that they operate in, but not commendable.

In relation to calculated economic motivation, this is where the regulated weighs the cost of compliance or self-regulation, the likelihood of apprehension, *inter alia*, the benefits of self-regulation prior to self-regulating, for example, Table 5.3 and Winter and May (2001). The findings of this study do not point to the strong influence of the likelihood of apprehension as one of the factors of the calculation process, except in Lagos State. The calculated motivation presented in this study differs from the calculated motivation in Winter and May (2001) in that calculated motivation in the current study appears biased as the contractors mainly consider the implications of not self-regulating with little consideration of the cost of self-regulation. Typically, in terms of drivers and motivators, business cases are made in proactive and active economic motivations (see results: Sections 8.5.8.3 & 8.5.8.4). These drivers and motivators show that the contractors involved have a good understanding of the benefits of H&S. H&S self-regulation results in increased productivity; contractors strive to maintain their status in the industry so as to stay in business. Self-regulation as a means of investment irrespective of the cost with the hope of getting future contracts as evidence of self-regulation gives the contractors leverage in the procurement process. By doing this, the contractors make a good impression of themselves both in terms of currency and H&S, suggesting their ability to deliver the projects without any incident hindering or delaying the projects. This remains among the characteristics of all the contractors that self-regulate whether constantly self-regulating or non-constantly self-regulating.

There are ‘constants’ in Nigeria’s construction industry, which may subconsciously assure the regulated of low or zero regulatory threat: for example, the poor H&S regulatory environment. The social issues such as social status, corruption, catalyse this; hence, the regulated may always prioritise the quest for economic gain.

Threat of regulation

The literature review shows that with adequate threat of regulation, there is effective self-regulation, for example, Section 2.6, Giuliano and Linder (2013) in Table 5.2. Literature review in Section 2.6 shows that this threat can come through various forms such as enforcement. This is normally a product of the regulators. It is clear from the results that the threat of the state is not as strong as expected, even in Lagos state, where they have statutory power. Understandably, the contextual factors in the social, political and institutional environments, for example, inadequate H&S laws, corruption and political influence account for the weak regulatory power. Just like many countries, it is common knowledge that if state actors are riddled with resource constraints, they are unable to effectively regulate, as studies found (e.g. Arimah & Adeagbo 2000; cf. Priyadarshini & Gupta 2003).

On the other hand, evidence from the study shows that the threat of regulation appears to come more as a result of the activities of non-state actors; this tends to be quite influential. This supports the point on having the non-state actors involved in H&S regulation (see counterproductive regulation and activities in Section 10.4.2). In other words, because the government has failed in its responsibility, non-state actors stepped in to fill the gaps. While this is consistent with literature, for example Watterson (2006), it points to alternative means of regulating industries.

Morality

The literature review, for example, normative motivation in Section 5.3.2.2 and Table (5.3), shows the moral reasons for self-regulation where it is viewed as a duty, the right thing to do. Typically, Nielsen (2003) concludes that the compliance level of fishers is largely influenced by what the fishers’ personal values are — what they consider to be wrong or right (also see Nielsen & Mathiesen 2003). Moral reasons for H&S remain among the key explanations for engage in H&S, as neglecting the H&S of the workforce and others is immoral.

The results of the study agree with the above on the moral concept explaining self-regulation (Section 8.5.3). Indeed, there is evidence of self-regulating in the Nigerian construction industry because it is the right thing. However, some respondents in viewing its occurrence as only on reactive basis also contest the moral reasons. While reinforcing the strong lack of morals reported by many respondents, it also questions the contribution of religion in building morals that are put in practice. Considering the religiousness of Nigerians, it is surprising that there are not high records of viewing H&S self-regulation as the right thing to do. Admitted that morals means different things to people, from a humanitarian basis, which most religions preach or teach, it raises concern. On the other hand, this suggests that the inclusion of morals aspect of H&S in religious teaching may be worth exploring.

10.5 SUMMARY: THE CURRENT REALITIES IN THE REGULATION OF CONSTRUCTION H&S IN NIGERIA

The current realities of H&S regulation in Nigeria emanating from this discussion are summarised as follows:

- There is evidence contesting the widely held view that the Nigerian construction industry is unregulated; rather the evidence points to a variety of self-regulatory approaches which can best be explained as complex. The voluntary self-regulation of H&S is not helped by the unfavourable attitudes of some contractors because there is no external involvement. Similarly, the non-state actors who are involved in H&S regulation demonstrate uncontrolled and, in some cases, counterproductive regulatory activities. Conversely, the local/international statute-based regulatory approaches appear to be more organised and effective but not without limitations on the efficacy of state administered regulatory approaches.
- The premise that the size of contractors and the ownership structure are the key explanations for identifying contractors that participate in H&S is equally debunked, demonstrating that in addition to geographic location, the structural advantage of contractors that constantly self-regulate may be a more appropriate distinguishing criteria. The scope and characteristics of these contractors are similar giving the structural advantage needed to constantly self-regulate in the midst of contextual issues.
- The study provides evidence that the collectivist cultural dimension, to which the country belongs to, may explain the attitudes of the contractors of accepting in

H&S self-regulation responsibility. This in most cases stems from the top management fostering a good relationship between workers and employers. While the 'tick-box' attitude to H&S guides contractors systematically, it results in a poor understanding of H&S that is, in turn, counterproductive to H&S. The bias in H&S regulation remains significant alongside the understanding that H&S is about window dressing, demonstrating the secondary understanding of H&S.

- While there is no evidence that the economic environment significantly influences the contractors, the social, political, institutional and cultural environments remain key but secondary in explaining the determinants of H&S self-regulation. The cultural institution is emphasised in terms of family and community values and sentiments in allocation of jobs. This collectivist cultural dimension tends to be emphasised in indigenous contractors as against multinationals, showing that the organisational culture of the latter remains uninfluenced by the social context.
- The study evidences that the lack of governmental and political attention complicates the regulation of H&S contributing to the dysfunctional H&S regulatory environment. These result in H&S self-regulation with multiple actors. The political influence also results in primary factors — low treat of regulation, bias in regulation, ineffective regulatory regime, and resisting regulatory efforts.
- While the factors in the preceding two paragraphs are manily secondary factors, the primary factors include a lot of regulatory activities that are counterproductive, for example, the uncontrolled and complex regulatory environment, over-ambitious standards. Some contractors with structural advantage are able to stand their grounds and self-regulate, resisting many barriers to H&S in the construction environment. However, corruption and political influence enable some unethical practices resulting in the low regulatory threat. The characteristics and scope of operation remain among the significant factors of H&S self-regulation.
- Some contractors do not view the regulatory framework as legitimate, thus self-regulation is unlikely. Social legitimacy, whether at local or international level, remains a key driver alongside industry legitimacy, which can be an advantage in the procurement system. This economic motivation is devoid of the cost of H&S self-regulation but with more interest on the implications of not self-regulating.
- The study shows the low threat of regulation from state actors making their activities ineffective and in some cases counterproductive. However, the threat

from non-state actors remains significant. This suggests that dependence on only state actors to regulate H&S may not be ideal.

- Despite the religiousness of Nigeria, H&S self-regulation due to moral reasons remains low, rather immoral activities and attitudes of contractors towards H&S remains significant. Religion was found to negatively impact on H&S, but shows prospects of contributing to improving H&S in general.

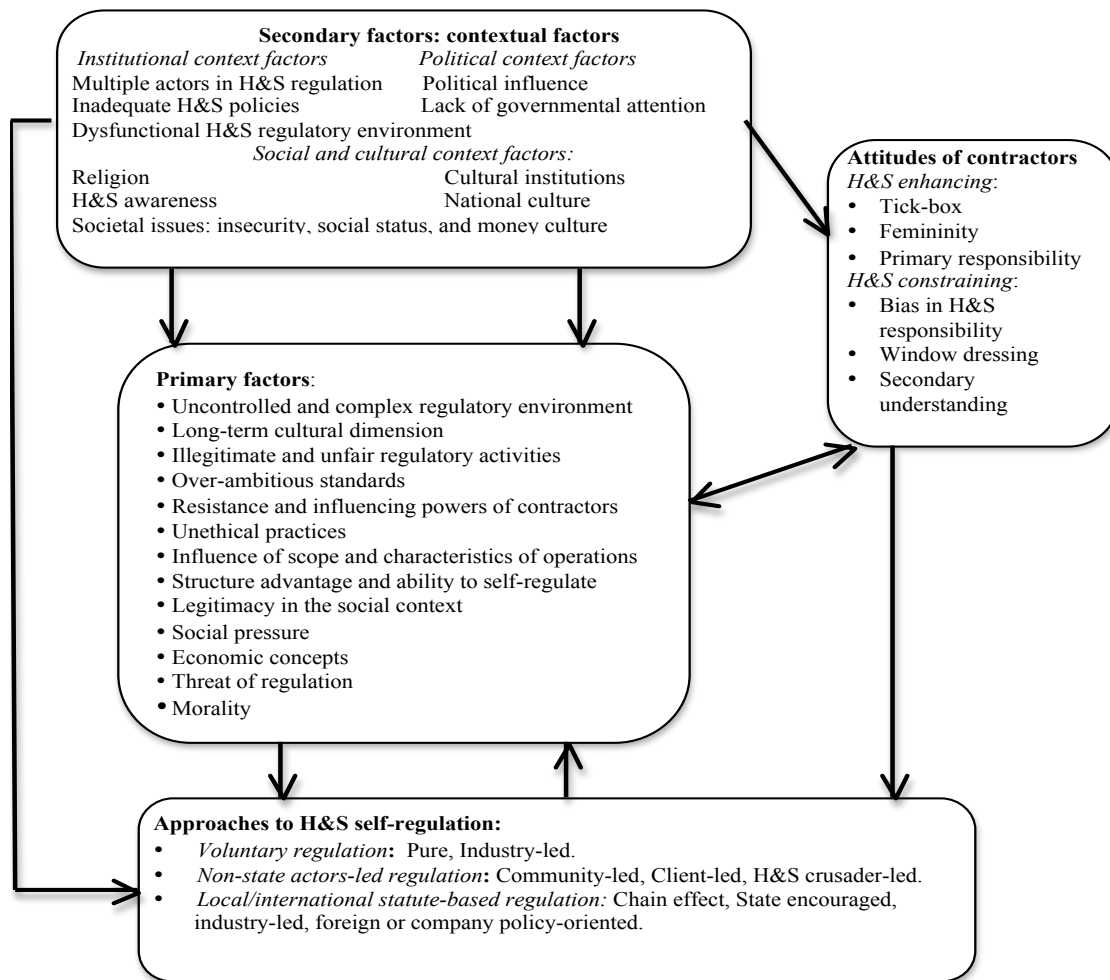


Figure 10.2: The realities of H&S regulation in the Nigerian construction industry.
Source: The author’s elaboration of the fieldwork

The framework to explain the current realities of H&S regulation in the Nigerian construction industry is presented in Figure 10.2. The secondary factors in the institutional environment enable the multiplex H&S self-regulatory approaches in Nigeria; these, in turn, have minimal influence on the primary factor ‘counterproductive regulatory activities’ in terms of ‘inconsistent and complex regulatory regime’.

10.6 FRAMEWORK FOR IMPROVING THE REGULATION OF CONSTRUCTION HEALTH AND SAFETY IN NIGERIA

Based on the analysis of the perceptions of the respondents on improving the regulation of construction H&S in Nigeria (in Chapter 9), the findings of the literature review, the results and discussion of the study, a framework of recommendations for improving construction H&S regulation is developed in this section and presented in Section 11.2. The evaluation of the framework's workability is presented in Sections 6.8.4.1, participant validation, and 10.7, and the development process in Figure 10.3.

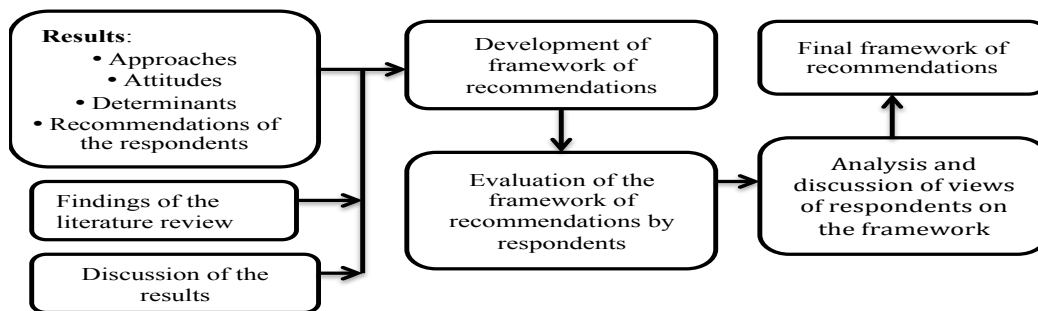


Figure 10.3: Framework of recommendation development process
Source: The author's elaboration

The framework is designed in awareness of the Labour, Safety, Health and Welfare Bill of 2012, (revised in 2016). The author of the thesis is not oblivious of the fact that some of the issues mentioned in this thesis may be addressed when the bill is passed into law. However, recommendations based on the aforesaid Bill do not only defeat the objectives of this study but would be illogical, unpragmatic and unrobust, as it is a Bill and may never be signed into law even though approved by the senate.

10.6.1 Statutory homogeneous regulatory framework, including transparent inspection and enforcement

The discussion in Section 10.2.1, mandatory/enforced H&S self-regulation, makes a case for the homogeneous regulatory system. Also, the results (Sections 9.3.1 & 9.3.4) propose a homogeneous regulatory system and an independent central construction H&S regulator; both will be statutory (based on contextualised H&S laws). This is consistent with the H&S regulatory system in developed countries such as the UK, which is not distributed but consolidated. While the supportive roles of third parties, media, professional and industry associations, and religious organisations in reputation management, and education and sensitisation are also

recommended in Section 9.3.5, the central construction H&S regulator in addition to monitoring and enforcing the H&S laws, will also advise, support, educate and motivate the regulated (Section 9.3.1). The foregoing rationalises the recommendation iii of B: the homogeneous regulatory system involving mixed regulatory models, reflectivity and tripartism. The applications of these are detailed in Sections 10.6.5–10.6.6. However, there is the need for the regulatory activities to be transparent. The above may result in increased threat of regulation, a driver of H&S self-regulation. The homogeneous regulatory system involving the aforesaid mixed regulatory models, will contribute to addressing some key barriers, multiple actors in H&S regulation, illegitimate and unfair regulatory activities (Section 10.4.2, Figure 10.4) and perhaps attitudes such as ‘context-defined’ and ‘unorganised’ (Section 7.5.1)

Furthermore, the respondents in Section 9.3.1 stress the need for contractors to be incentivised. Incentives are not only a driver of H&S self-regulation as highlighted in Section 10.4.2 and Literature review (Table 5.3) but also a technique for regulation, for example, see Sections 10.4.2, 2.6.3.1, 2.6.3.3. This has informed the incentive centred recommendation, E in Section 11.2.

In terms of enforcement (Section 9.3.1), the respondents’ dependence on enforcement including inspection is debunked based on historical records that show inspection and enforcement failing to produce the desired results among SMEs (cf. Fairman & Yapp 2005b). Further, literature review in Section 2.6.3 highlights some challenges in enforcement, for example, damage to the relationship between the regulated and the regulator, high resource requirements. However, it can be argued that H&S regulation is emerging in Nigeria hence there should be high concentration on inspection, as it will contribute to developing SMEs who need guidance. Besides, the enforcement and inspection will be complemented by other regulatory techniques backed by economic concepts, education and advisory (Section 9.3.1). Also, the literature review shows that the context of Nigeria makes a case for inspection and enforcement of H&S legislation in the construction industry. Nonetheless, the author is confident that over-reliance on inspections would not be effective at best and counterproductive at worst.

The literature review evaluates goal-based legislation, prescriptive legislation and a combination of both — mixed legislation, showing the downsides and benefits of all,

then recommends them respectively based on various circumstances (Section 2.2). In the current study, some respondents have suggested goal-based regulation, some view otherwise suggesting the preference for prescriptive or mixed legislation/regulation (Section 9.3.5). Additionally, Section 10.2.1 makes a case for the mixed form of legislation, but the prescriptive legislation would precede the goal-based ones. All the above calls for the mixed form of legislation, III of recommendation B (Section 11.2).

However, the premises established so far in this section may be threatened by social and political contextual factors such as money culture, hence in Section 9.3.1 the respondents' demand for transparent regulations. That societal issues such as corruption, influence of social and political status are reported in the current study does not mean that there are no honest Nigerians, at least the Economic and Financial Crimes Commission (EFCC), and Independent Corrupt Practices and Other Related Offences Commission (ICPC) stand for transparency and honesty in Nigeria, fighting societal issues such as financial crimes and corruption. It is within the powers of the aforesaid institutions to 'watch-dog' the activities of the proposed independent central construction H&S regulator, deterring them from unethical or corrupt practices. The media and professional bodies are also capable of monitoring H&S practices on construction projects. This situation calls for the recommendation C in Section 11.2: the roles of an independent offshoot of both institutions and the media and professional bodies. It is logical that the foregoing will challenge corrupt practices in the implementation of the H&S regulation. Transparent inspection and enforcement will contribute to addressing the negative resistance and influencing abilities of contractors and unethical practices outlined in Section 10.4.2, Figure 10.4.

Importantly, any improvement measures may be unachievable considering the lack of governmental support to H&S, a secondary barrier, thus, recommendation A in Section 11.2, pressure on the Nigerian government by external institutions, is proposed.

10.6.2 Provision of adequate contextualised H&S laws

This study provides evidence and logical discussion that the lack of contextualised construction H&S laws remains among the main issues hindering safe H&S practices in Nigeria's construction industry. Contextualised construction H&S laws will, in turn, address some barriers to H&S regulation, uncontrolled and complex regulation,

multiple actors in H&S regulation, inadequate H&S policies, a dysfunctional H&S regulation system, illegitimate and unfair regulatory activities, over-ambitious standards, long-term cultural dimension (Figure 10.2, Section 10.4) and the gap in H&S responsibility of main contractors over subcontractors. Contextualised construction H&S laws which are different from the Labour, Safety, Health and Welfare Bill of 2012 (revised in 2016) and do not contradict the Bill but expand on it may address H&S issues from solely a construction perspective. It will also result in structure advantage to more contractors, providing the ability to self-regulate and the threat of regulation, which are drivers of H&S self-regulation (Figure 10.2, Section 10.4). The literature review demonstrates the imperativeness of laws and regulatory systems designed based on the contexts of countries and not ‘copying or transposing’ them from other countries, for example, Danso et al. (2015). The following are the subject matters of the proposed contextualised H&S laws in Section 11.2.

Mandatory H&S consultants: the workability of having H&S consultants for every project (Section 9.3.4) is questioned because of the cost and the lack of adequate numbers of H&S consultants and the history of such steps failing in Nigeria. However, these are not enough reasons to avoid it, considering its imperativeness hence recommendation VII of B in Section 11.2: certified H&S consultants.

Database of all construction projects: the Factories Act of 2004 requires that factories be registered with the LPID (Section 3.2.2.1), the respondents recommend the same for all construction projects in Nigeria. This will provide a database of all construction projects, making enforcement of H&S laws easier, alongside insurance claims. This is the subject matter for recommendation V of B: compulsory registration of all construction projects (see Section 11.2).

Statutory H&S responsibilities for designers, and employers: The findings, ‘chain effect’ and the attitudes such as ‘responsibility’ (Sections 7.4.1 & 7.5), and evidence in the literature where secondary legislation such as the CDM regulations of 2015, which place H&S responsibilities on designers (HSE 2015), make a case for statutory H&S responsibilities for designers, and main contractors over subcontractors (recommendation VI of B in Section 11.2). This is on the grounds that main

contractors are indirect employers of subcontractors but the subcontractors are also employers, and designers are able to prevent hazards through design.

10.6.3 Statutory-assigned H&S responsibilities for clients

H&S responsibilities strongly backed by statutes are discussed in Sections 9.3.2 alongside collaboration between the clients and contractors on H&S responsibilities because of the strategic position of the client in the supply chain. The results of the current study and its discussion demonstrate the ability of the client to improve and hinder H&S, for example, inadequate client involvement in Sections 8.5.5.2 and 10.2.2. Allocating H&S responsibilities, which are bound by local laws, will significantly contribute to improving H&S. While this hinges on the attitude, ‘responsibility’ (Section 7.5.2), it will address barriers found in this study such as inadequate client involvement in Section 8.5.5.2, inappropriate procurement systems — wrong criteria for awarding contracts by client — in Section 8.5.5.3. It is also consistent with drivers of H&S self-regulation, client influence in scope and characteristics of operations, outlined in Section 8.5.5.7.

Conversely, the practicality of ‘statutory-assigned H&S responsibilities for clients’ in terms of collaboration (such as clients working with the contractor to prepare H&S manuals, among the recommendations of the respondents) in Section 9.3.2 may be impractical or over-ambitious. A significant number of clients such as domestic clients both in Nigeria and elsewhere may not have the necessary H&S skills and knowledge and may be unable to fund it through third parties such as H&S consultants. This may explain why the CDM regulations of 2015 in the UK, in allocating H&S responsibilities to domestic clients, make room for principal designers and principal contractors or contractor to take the client’s H&S responsibilities. Nigeria can model its regulations after the UK CDM regulations.

Further responsibilities may include clients prequalifying contractors (Section 9.3.2). Accepted that this will significantly contribute to H&S, again the issue of client knowledge comes in. How will clients differentiate between the ‘chaff and the corn’? Recommendation IX of B in Section 11.2 (contractor H&S competency assessment bodies) is proposed. This will help the client in the prequalification of contractors.

This concept of prequalifying contractors at all levels will act as an economic concept-based driver (see Figure 10.2 & economic concept in Section 10.4.2).

Furthermore, the emphasis by many respondents on a mandatory percentage of the contract sum allocated to H&S is noteworthy. The evidence that clients do not provide the funds for H&S suggests either that contract documents specify funds for H&S but it is not provided or that they do not specify an adequate amount or that they do not specify it at all. This informs the recommendation VIII of B: a statutory backing for a mandatory percentage of the contract sum for H&S (see Section 11.2). While this may make a difference, as clients will be liable for a breach of the law in that regard, it can foster and/or instill an attitude of accepting H&S responsibility.

10.6.4 Education and awareness

The study provides evidence that the lack of awareness and understanding of H&S significantly hinders H&S, contributing to, among many, unfavourable attitudes towards H&S. In agreement with school curriculum (Section 9.3.3), recommendation II of B (mandatory H&S module in schools) in Section 11.2 is advanced. Drawing on the little potential of morality to improve H&S in Section 10.4.2, the role of academics in education and awareness is covered (recommendation E: Section 11.2).

Also, the respondents in Section 9.3.3 emphasise the need for detailed guidance and information on H&S for contractors. This is expected, as the poor level of H&S in the Nigerian construction industry is well covered in various places in this thesis. Social media such as Facebook, Twitter, and Whatsapp remain among the ‘trending’ information media in Nigeria. The literature shows the ‘mimetic forces’ concept where social networking is a means of disseminating information among industry self-regulation programme members (King & Lenox 2000). The mimetic forces in this context can be that the firms that self-regulate can educate those that do not self-regulate or demonstrate reasons why they should self-regulate. The points in this paragraph have prompted recommendation IV of B in Section 11.2: dissemination of H&S information and social networking by the central construction H&S regulator. This will contribute to supporting and improving H&S awareness level.

10.6.5 Social pressure

There is evidence in Sections 7.4.6, 8.4.2, and 10.4.1 that cultural institutions strongly influence H&S. This also emerged in the Literature review. This situation has called for the recommendation D in Section 11.2 where H&S roles with no penalising powers are assigned to the cultural institutions.

Furthermore, the study evidences the significant contributions of H&S crusaders in H&S in Nigeria. While their contribution is commended, their enforcement and monitoring roles can be stopped, but they can provide support in terms of whistle blowing and sponsoring legal proceedings. The literature review in Section 2.3.3.2 reveals a three-party model of regulation, tripartism, covering, among many, the role of Public Interest Groups in regulation. This contributes to the subject matters for recommendation III of B (Section 11.2).

10.6.6 Industry involvement

The study shows the significant contribution of the oil and gas, telecommunication and banking industries in construction H&S regulation. As a result of this and drawing on mixed regulatory strategies (the tripartism and the reflectivity: Sections 2.3.3.2–2.3.3.3), the private complementary role of the industry in construction H&S regulation in recommendation III of B is underpinned. Admitted that involving the oil and gas, telecommunication and banking industries in the official regulation of H&S may make regulation more complex, steps outlined in recommendation III of B, which are underpinned by the reflectivity model of regulation, address this. It should be recalled that the reflectivity regulatory model involves public and private strategies (which may be legal and non-legal) in regulation (Ayres & Braithwaite 1992).

SECTION 10.7 OVERVIEW OF FEEDBACK FROM RESPONDENTS ON THE FRAMEWORK OF RECOMMENDATIONS

The framework of recommendations was sent to three academics and twelve practitioners for evaluation on its workability/practicality and eleven responded (as Section 6.8.4.1, participant validation, already shows). The eleven respondents include the following from consulting and/or contracting firms: two H&S managers, an H&S officer, a Civil Engineer, a Quantity Surveyor, two Builders, one Project Manager, and an owner of a contracting firm who is also an Architect. The rest are two academics from higher education institutions with Building Engineering and

Quantity Surveying backgrounds, respectively. The practitioners who cover the four categories of contracting firms, large, medium, small and micro, are from the six geopolitical zones, South South, South East, South West, North West, North Central, and North East. While the two academics have over 15 years and 25 years of experience in academia and the construction industry, all the practitioners have over six years of construction industry experience. These respondents are not limited to some participants in Table 7.3, for example, respondents N, Z, ZB, ZD. The respondents were asked to comment on the workability of the framework of recommendations. Table 10.2 summarises some selected points and quotes from the feedback. The feedback was largely positive.

Table 10.2: Summary of feedback from respondents on the framework of recommendations

Respondents	Authors' action	Evidence including extracts from feedback
Academics	• NAC	• <i>'The framework is workable especially the idea of EFCC and co. This is great and will be welcomed by the government considering the current fight against corruption'</i> .
	• NE	• The central regulator reporting to the president.
	• NE	• Detailed H&S laws — prescriptive laws.
	• NE	• More emphasis on awareness over enforcement.
	• NE	• <i>The regulation of H&S should be state by state, but the rest in the framework is possible'</i>
	• NE	• <i>'The framework is good but domestic clients should exclude projects below 1 million Naira (about £2000)'</i> .
	• Actioned	• <i>'The framework is going to work, but registration of projects should be online and through local authorities'</i> .
Practitioners	• Actioned	• <i>'Main contractors can do a lot on H&S: Have you thought about that? However, I strongly agree with the framework'</i> .
	• NE	• <i>'Enforcement should be key above all in the framework'</i> .
	• NE	• <i>'The government should assist with more funds for industry association. They know exactly what to do but they have limited funds, but I concur with the rest of the recommendations.</i>
	• DIT/NE	• There should be as many parties involved the regulation of H&S.
	• DIT	• State by state laws.
	• NE	• <i>'The local governments can do better than the state hence H&S should be run by the local government'</i> .
	• NAC	• <i>'I agree with all in the framework but disagree with the points on morals' thing about it, has morals really helped us in Nigeria'</i> .
<p>• Key: NAC: No action as comment(s) accords with the framework NE: No evidence that this is workable or a better option than the current recommendation in the framework. DIT: Debunked in the thesis</p>		

The author has factored in some points from the feedback into the revised version of the framework, but some have not been factored in, as there was no evidence that they are better than the current recommendations in the study. Comparing Table 10.2 to the revised framework of recommendations in Section 11.2, it is evident that the feedback from the respondents had little effect on the final output.

CHAPTER 11: CONCLUSIONS AND RECOMMENDATIONS

11.0 INTRODUCTION

This chapter summarises the entire research, presents the conclusions and recommendations of the study, the limitations of the research, and contributions to knowledge. The study has explored the current realities of the regulation of construction H&S in Nigeria. Consequently, the approaches to H&S self-regulation, their determinants, and the attitudes of contractors towards them, have been explored. Construction contractors and key informants in Nigeria have been interviewed.

11.1 SUMMARY OF THE RESEARCH

Chapter 1 contests the view that the Nigerian construction industry is unregulated but demonstrates that the industry is self-regulated, according to literature. It goes on to indicate that in spite of the construction environments that do not encourage H&S, there are multiple regulatory approaches; the standards, attitudes towards H&S regulation differ, ranging from positive to negative. However, what remains poorly understood are the current realities in the regulation of construction H&S in Nigeria (including the reasons for self-regulating H&S), in a complex contextual environment. This will support efforts towards improving H&S. It is common knowledge that the construction industry is hazardous but the records of some developing countries are worse. Based on the foregoing the following questions have guided the research:

- How can the current realities in approaches to construction H&S regulation be explained?
- How can the attitudes of construction contractors towards construction H&S self-regulation be explained?
- How can the determinants of construction H&S self-regulation in Nigeria be explained?

While extant literature presents determinants to self-regulation, they mainly centre on environmental science/management sector and developed economies. Importantly, no studies have examined the discourse from a Nigeria construction perspective and its contextual environment. Understanding these environments remains pertinent in addressing the H&S issues in developing countries.

11.1.1 ADDRESSING AIMS AND RESEARCH OBJECTIVES

The main purposes of the study are to advance the understanding and critically explain the current realities of the regulation of construction H&S in Nigeria and to develop a framework of recommendations for improving it based on empirical data and analysis. This led to developing a framework that is presented in Section 10.5 as Figure 10.2. The research objectives set in answering the research questions and addressing the aim and how they were addressed are presented below.

Objective 1: Review literature on regulation, including self-regulation, highlighting the process and approaches to regulation, opportunities and challenges.

This objective is addressed in Chapter 2, providing a platform for the study. The literature review has revealed the emergence of self-regulation, its definitions, the approaches it takes, the opportunities and challenges. The literature review shows that self-regulation, has emerged, as a result of the inability of command and control approach to achieve the expected level of compliance. While self-regulation fosters flexibility in regulation and promotes innovation, it can pose transparency, accountability and quality questions. The involvement of other parties in self-regulation can also present challenges likewise opportunities. Self-regulation differs from country to country and industry to industry; it centres on little or no external involvement and on encouraging the involvement of the regulated in the regulatory process so as to achieve self-compliance. The review highlights the level of complexity that may exist when self-regulation is multiplex.

The three main processes of regulation — setting standards, monitoring and enforcement — are also replicated in self-regulation. There are a lot of techniques used in the above stages that make it different from the command and control regulation. In the enforcement process, incentive-based techniques, for example, economic incentives, can motivate compliance, as businesses would always like to make profits. Further, so as to continue making a profit and staying in business, reputation management, which can come in the forms of positive or negative publicity strategies, also make economic and social legitimacy cases for compliance. However, views hold that positive publicity strategy may be more effective than the negative

publicity strategy. The need for education and information is also emphasised as one of the techniques in self-regulation as, without adequate knowledge and guidance, compliance will be skewed to only the large firms who can afford to pay for the knowledge. Nevertheless, the inspection of workplaces remains another means of ensuring a threat of regulation. In some cases, negotiations with the regulated may be needed. These techniques also account for determinants of compliance or self-regulation. The literature review concludes that in the light of the potentials and downsides of the enforcement techniques, the conditions in the regulated's environment determine enforcement techniques to be adopted and their combination.

The literature review also revealed three main categories to self-regulation, voluntary enforced, and industry self-regulation. While industry self-regulation has recorded success in some occasions, it has also recorded failures. Its ability to involve third parties including the industry remains a benefit as they are involved in the regulatory process and are able to get their members to comply. However, the extent of governmental involvement remains an issue in addition to knowing when to get involved. The literature review demonstrates that the involvement of the government is vital to the success of industry self-regulation, but their roles can be to act as a catalyst, providing an incentive to the industry and ensuring that the industry does not abuse its powers. The interest of other third parties such as PIG, trade unions, over that of the regulated remains another issue, but the literature review demonstrates that they can play a vital role in regulation. These third parties can complement the efforts of the industry in self-regulation. As a result of the contention, it is concluded there is no universal approach to industry self-regulation as it is determined by circumstances.

The enforced self-regulated organisations or the industry or the state set standards that the organisations will have to comply with, but a state regulator oversees it. If the organisations set standards, they are approved by the state. In other words, enforced-self-regulation is compliance with the law, as it is a statutory requirement.

In pure or voluntary self-regulation, there is no external involvement; it is by choice. Literature review shows that its standards remain questioned with some authors viewing its success as context defined. Its features suggest the likelihood of questionable and uncontrolled standards and activities.

Objective 2: Critically review literature on the H&S regulatory framework of Nigeria and its construction industry including its legislative context, indicating the approaches to H&S regulation and the attitudes of contractors towards it.

Addressed in Chapter 3, this objective built on the achievements of objective 1 to partly make a case for the study, but more importantly, to demonstrate the state of H&S in the industry and the attitudes of the contractors towards it. The review shows that the state of H&S in Nigeria is poor but that H&S in the construction industry appears to be worse. The institutional arrangement for H&S is poor and inadequate with the regulator of H&S highly understaffed and understandably highly ineffective. This can be explained by the lack of governmental involvement in H&S, the local H&S law, the Factories Act of 2004 being out of date and riddled with anomalies. These anomalies, in turn, encourage non-compliance with impunity but discourage the regulator of H&S and make them powerless. Most importantly, one anomaly of the Factories Act, which significantly impacts on the industry, is that Article 87 of the Act means that the law does not cover construction sites and activities in the definition of its premises. Consequently, construction sites and activities (by implication the industry) are viewed as unregulated.

However, drawing on the definition of self-regulation and the approaches to it, the literature review revealed that the Nigerian construction industry is self-regulated and not unregulated. This is because the adoption and administration of H&S laws from developed countries by Nigerian contractors is self-regulation. When the contractors adopt and administer H&S laws because it is a statutory requirement, it can be classed as enforced self-regulation. When some other contractors, including subcontractors, do the aforesaid because of the main contractors, which are bound by H&S laws or foreign company policies, hence require them to comply, it can also be viewed as enforced self-regulation. Self-regulation is also indicative in oil and gas industry and banking sector, where they set standards for the contractors and go on to administer them; this can be classed as industry self-regulation. Some clients also stipulate that contractors adopt and administer H&S standards and even go on to enforce them. Conversely, when contractors adopt H&S laws without any external pressure, it can be viewed as pure self-regulation. Even the adoption and administration of the local National Building Code of 2006 (which is yet to become law) by some contractors is

yet another demonstration of self-regulation. Despite the above, scholars view the construction industry as unregulated, and issues relating to H&S regulation have always been approached from an unregulated understanding, overlooking the self-regulatory concept.

As a result, no studies in Nigeria have explored the industry from a self-regulatory perspective. This demonstrates the gap in knowledge of the current realities in terms of regulating construction H&S, suggesting that it is poorly understood. By implication, this means that the approaches to construction H&S self-regulation are poorly understood and empirically unverified. There may also be other approaches to H&S self-regulation in the industry. Furthermore, by implication, why the contractors self-regulate (or not) despite the contextual environment of Nigeria remains poorly understood. Importantly, the relationship between views, feelings and behaviours, points to the imperativeness of understanding the attitudes of the contractors that inform their self-regulatory behaviours, again, poor understood. The imperativeness of understanding the attitudes of the contractors towards H&S self-regulation is demonstrated in the literature review, where various understandings towards H&S based on the size of contractors, the structure of ownership and culture was shown. This, of course, contributes to the difference in performance of the contractors.

Objective 3: Analyse the political, social, institutional, economic and cultural contexts of Nigeria, highlighting contextual influences on the regulation of construction H&S.

This is addressed in Chapter 4 (the institutional context mainly in Chapter 3) and established in Chapter 8. The literature review shows that to effectively address H&S issues in developing countries, the contexts of the countries should be well understood. Sadly, little is known of the environments of a lot of developing countries such as Nigeria in terms of H&S. This is the first study that is examining contextual influences on H&S in detail in Nigeria.

The political environment, the literature review suggests the implications of uncontextualised political systems on Nigeria. The political system is riddled with corrupt leaders and politicians and gross electoral malpractices; the masses have little

faith in them. Politicians are very powerful, significantly influencing the institutions (including H&S regulators), but show lack of concern and attention to H&S.

Regarding institutions, the institutional arrangement for regulating H&S is poor, and in terms of the construction industry, fragmented with some institutions with overlapping responsibilities. For example, COREN and NESREA have structure safety and environmental responsibilities in the construction industry respectively; ISPON, a professional institution, promotes H&S and regulates safety professionals, but their activities have little impact. Recall that the H&S legal and institutional contexts of Nigeria are covered in Chapter 3 where no local H&S laws cover the construction industry.

The cultural environment of Nigeria remains significant with a strong collectivist cultural dimension attribute. There is strong community leadership and a high respect for leaders and elderly ones; family and community values are highly respected. The same can be said of religion where Islam and Christianity remain the major religions in Nigeria and indigenous beliefs cover just a little fraction. As highly religious people, the religious and superstitious beliefs characterise the life of an average Nigerian, influencing their attitudes in different ways, including towards H&S. Despite that religions promote morals, social issues such as corruption, and unethical practices can be viewed as commonplace in Nigeria, significantly hindering development in Nigeria including H&S. As a result of the collectivist cultural dimension, communities can do a lot including influencing or regulating H&S.

Recently, the economy of Nigeria has recorded significant growth, becoming the largest economy in Africa, but a lot of Nigerians are living on below one dollar a day and unemployment level is high. The foregoing are reflected in the construction industry, as a lot in the industry are unskilled, walking straight from the streets to the industry; earning a living is their priority not H&S. The boom in the economy favours a few in the industry with a lot of SMEs being left out; hence H&S is secondary.

Objective 4: Critically review self-regulatory and compliance determinants literature and develop a framework for analysing the determinants of construction H&S self-

regulation based on theories and evidence, but considering the social, institutional, economic, political, and cultural influences in Nigeria.

Reviewing germane literature on the determinants of self-regulation and compliance with laws, and factoring in the contextual environment of Nigeria, a framework for analysing the determinants of construction H&S self-regulation was developed, addressing objective 4 in Chapter 5. Prior to this, a relationship was shown between regulation and compliance with laws in Section 2.5 hence the review of the literature on determinants of compliance laws. The outcomes of the review of the latter remain consistent with the outcome of germane literature on determinants of self-regulation.

The review shows grey areas that addressing would be beneficial to developing countries and the socio-legal industry. First, literature on self-regulation has not examined the contexts within which self-regulation takes place. Second, existing literature has not centred on the construction industry; considering the nature of construction activities and the fragmentation of the industry, it is logical to examine it from a construction industry perspective. Third, extant literature centres on industrialised countries and environmental management/sciences, hence the transferability of the existing knowledge to the construction industry is questionable. Authors argue against ‘copying’ policies and standards from developed countries, as they are mostly inadequate in developing countries.

After the framework for analysing the determinants of construction H&S self-regulation was developed based on theories and evidence, it was academically validated and published as Umeokafor and Isaac (2015a). It was also used in the current study and in Umeokafor (2016, 2017). The framework is made up of eight elements that are topical discussions or explanations of H&S self-regulation; it also shows contextual influences on the framework and organisations (see Figure 5.1). The framework consists of, first, the normative case which is explained by the legitimacy of the regulatory framework and the moral argument for self-regulation. Secondly, there is social legitimacy, which is self-regulating so as to be socially legitimate in the society or industry. Thirdly, social pressure, underpinned by the organisations succumbing to pressures from the media, pressure groups hence self-regulating; this can result in social legitimacy hence, a link. The fourth is industry case where the

industry activities such as supply chain, procurement are covered. The fifth, the power relationship, is the calculated aspect of self-regulation, where the regulated weighs their ability to withstand or resist issues (such as the regulatory threat) or influence matters in the society. The sixth, the economic case, made of another calculated case but also financial cases, where the regulated calculates the financial benefits of self-regulating, the likelihood of getting apprehended, and then decides to self-regulate or not. The financial case relates to self-regulating because of economic benefits such as profit but not underpinned by the rational behaviour of calculation. The seventh is the ability to self-regulate where the willingness to self-regulate is not enough; this combines other elements of the framework to become an element. The last is the organisation case where points on ownership structure, organisational culture are covered. All the elements are not independent.

Objective 5: Empirically verify or refute the literature indicative approaches to construction H&S regulation and investigate other approaches (if any) and the attitudes of contractors towards H&S regulation.

This objective is addressed in Chapters 7, 8 and 10. The research questions show that a qualitative strategies and methods would be adequate for addressing the research questions and objectives. In doing this, the interview guide was developed based on the literature review, opinions of the author and views from the industry. Prior to this, the data collection instrument was checked to ensure that it was useable. This entailed, ‘ensuring interview questions align with research questions; constructing an inquiry-based conversation, receiving feedback on interview protocol; piloting interview protocol’. Upon receiving the feedback from the pilot study, the interview guide was revised and the main data collected. Snowball and stratified purposeful sampling of construction contractors and key informants in Nigeria and in-depth interviews of the aforesaid were conducted. Of the 53 interviews conducted, a sample of 46 was used in this study, informed by data saturation.

While the checking for the usability of the interview protocol has improved the quality of the research, other steps such as peer debriefing and triangulation have been adopted. In terms of triangulation, multiple triangulation, persons, analytical triangulation and method triangulation was adapted. The method triangulation

entailed computer-assisted method and constant comparison methods involved comparing the analytical groups or unit of analysis, CSRCs, NCSRCs, and Non-SRCs. The person triangulation involved more than one level of persons, contractors and key informants. The triangulation occurred complementarily, convergently, dissonantly, providing unique information, and illuminating the information. The saturation matrix was used to confirm when additional data was not significantly contributing to the development of theory.

The findings of the study verified and established that the Nigerian construction industry is self-regulated, but in various forms with multiple key actors and regulatory instruments from various contexts. The key actors are not limited to the communities, social actors, international and corporate organisations, LSSC, the oil and gas industry. The three key categories of regulatory instruments are international, and local codes and standards, and internally developed standards. While the approaches indicated in literature, industry, client-led, enforced and pure self-regulatory approaches were verified empirically; community-led self-regulation and H&S crusader-led self-regulation were revealed. The approaches were broadly classed under three key groups, voluntary self-regulation, non-state actors-led regulation, and local/international statute-based regulation. As expected, the pure self-regulation was found to be of questionable standards, and linked to the attitudes of the contractors that H&S self-regulation is practiced when convenient, based on affordability, and the responsibility of a certain group in the industry, large contractors. Understandably, this was found to mostly occur within the smaller contractors. In terms of industry self-regulation, its occurrence is consistent with literature but raises concerns, as there is no evidence of third party involvement. However, the evidence in the study shows that despite the absence of a third party, the impact of the industry in improving H&S, for example, the established and emphasised regulatory regime, remains significant. The enforced-self-regulation advances the understanding of enforced self-regulation through chain effect and foreign company policy-oriented enforced self-regulation. The chain effect is akin to main contractors and subcontractor relations in terms of H&S management but differs in that in the former, the subcontractors are not dependent on the main contractor in terms of the regulatory process. The foreign company policy-oriented enforced self-regulation is an evidence of global impact on H&S. Further, the study shows evidence of 'state-within-a-state-led' H&S self-

regulation where one state out of the 36 state of Nigeria, set local H&S laws and administers them through LSSC and co. While the regulatory activities of LSSC were found to be highly questionable and biased resulting in some contractors viewing it as illegitimate, it remains a significant contribution by the state to H&S improvement.

In terms of client-led H&S self-regulation, the findings of the study indicate that it mostly occurs in indigenous contracting firms, with no evidence of it in multinationals. Understandably, multinationals and the few SMEs who have the structural advantage already have a structured and established H&S regulatory regime so the client may need to do little or nothing in regulating H&S. Also, the study shows little commitment or attention to H&S self-regulation from public clients.

The study goes on to show the significant contribution of civil actors, H&S crusaders, in leading H&S self-regulation, but with no statutory backing. Using reputation management, overt and covert strategies, there is some level of acceptance (in good faith) of their activities in the industry. Writing about acceptance in good faith, the case was found to be different in community-led H&S self-regulation. Supported by the collectivist cultural dimension of the community, the communities go on to set or stipulate and administer H&S standards, both formally and informally, through community liaison officers. In the process of administering H&S standards, they adopt techniques underpinned by societal issues such as kidnapping construction workers; they view H&S as a means of making money, as a means of exploiting contractors. These, in turn, affect the relationship between the communities and the contractors with many contractors working in fear in these communities. This also shows the excessive powers of the community and the uncontrolled nature of the regulatory activities. The impact of the community in the regulation of H&S may be formal or informal, it was found to be very pronounced and well recognised and skewed to a particular geographic location of the country namely, the Niger Delta.

Concerning the attitudes of the contractors towards H&S self-regulation, the findings mirror the optimum H&S regulation enhancing attitudes ('primary', 'accepting H&S responsibility' and 'tick-box') and optimum H&S self-regulation constraining attitudes ('irresponsibility', 'secondary', 'tick-box', 'unorganised/incomplete', 'camouflage', and 'context-defined'). H&S self-regulation was found to manifest as

accepting H&S as a responsibility hence self-regulating, but also not accepting H&S self-regulation as a responsibility and leaving it to some sectors in the industry, large contractors, oil and gas sector. Thus, some contractors do little or nothing about H&S. These can be explained by the understanding of members of management with a positive attitude underpinned by femininity cultural dimension or a negative attitude underpinned by long-term cultural orientation. Also manifesting in a positive way and a negative way is the understanding that H&S self-regulation is a 'tick-box'. While a 'tick-box' guides the contractors on H&S to self-regulate, it also presents a wrong perception of compliance impacting on the understanding of H&S. The negative understandings of H&S self-regulation were pronounced in indigenous SMEs.

Another attitude of contractors towards H&S self-regulation, which do not support H&S self-regulation is that H&S self-regulation is understood as a camouflage, a window dressing issue so as to win contracts or be socially or industrially legitimate. Explained by the social contextual factors, corruption, this was pronounced among NCSRCs and Non-SRCs, but with disputable evidence of CSRCs playing games. Similar corrupt or unethical practices appear to be commonplace in the industry. Equally, the understanding that H&S self-regulation is to be done at convenience, within the reach of the contractors suggests that it is not viewed as responsibility but as secondary. These attitudes 'camouflage', 'convenience', 'enforced', 'reactive u' make up, the attitude, 'secondary', another optimum H&S self-regulation constraining attitude. These attitudes explain other attitudes that H&S self-regulation can be 'unorganised' or 'context-defined'. Understandably, considering the background established by this study, the quality of H&S self-regulation can be defined by the context such as project and client, as the study shows. As can be seen, these attitudes are not independent.

Objective 6: To establish and explain the factors influencing the self-regulation of construction H&S in Nigeria.

In agreeing with the elements of the framework for analysing the determinants of construction H&S self-regulation, the factors established and explained in Chapters 8 and 10 also addressed objective 6; these factors are interrelated.

The factors established and explained in the current study are categorised as primary or direct factors and secondary or indirect factors. The secondary factors are from the institutional, social, political and cultural environments. They include money culture, insecurity, inadequate H&S policies, multiple actors in H&S regulation, cultural institutions, political influence, social status and lack of governmental attention. Addressing the influence of the contextual factors will strategically improve H&S regulation without which H&S improvement may be far-fetched.

The primary factors include structure advantage, unethical practices, social pressure, economic concepts and overambitious standards, the threat of regulation, illegitimate and unfair regulatory activities, the influence of scope and characteristics of operations. Other primary factors are not limited to structure advantage and ability to self-regulate, legitimacy in the social context and social pressure. The findings of the study show that explaining H&S solely on the basis of the size of company or structure of ownership is a misconception; rather, structure advantage and geographic location are also significant explanations. Structure advantage enhances the ability of contractors to self-regulate. Interestingly, that some contractors are not less concerned with being socially legitimate locally but would strive to be socially legitimate internationally remains remarkable. The economic concept where contractors would self-regulate to have leverage in the procurement process or be industry legitimate despite the cost of self-regulation offers some level of optimism to H&S in Nigeria. Despite the high level of religiousness of Nigerians and the moral preaching of religion, it is not reflected in the self-regulatory activities of contractors. This is not helped by the unethical practices such as bribery and corruption, falsification of H&S documents to get contracts and ostensibly self-regulating. Above all, while self-regulation in the midst of the contextual environment that does not support H&S is encouraging, it results in counterproductive regulation and activities. For example, the multiplex and complex construction H&S regulatory approaches in Nigeria increase the cost of self-regulation as against if there is a homogeneous regulatory system. Furthermore, the corrupt activities of the state actors and the bias in their regulatory activities means that 'compliance' can be bought; it also presents a wrong perception of compliance. Additionally, it results in the contractors viewing the regulators' activities as unfair and illegitimate.

Objective 7: Produce a framework to understand and critically explain the current realities of construction H&S regulation in Nigeria based on empirical data and analysis.

The framework to understand and critically explain the current realities of construction H&S regulation graphically presented in Figure 10.2 has been produced after consolidating and analysing the empirical data, thus addressing objective 7. The key secondary factors noted in the above paragraph influence the attitudes of the contractors, determine the multiplex approaches in H&S self-regulation and influence the primary factors of H&S self-regulation. The attitudes of the contractors that enhance H&S self-regulation can be explained as a ‘primary responsibility’, a ‘meeting the rules exercise’ and ‘caring for others’ while ‘bias in H&S responsibility, the understanding that H&S self-regulation is about window dressing and not a priority all constrain H&S self-regulation. These attitudes also influence the approaches in H&S self-regulation and the primary factors of H&S self-regulation but the latter two also influence each other. The approaches in H&S self-regulation are broadly categorised under voluntary self-regulation, non-state actors-led regulation and local/international statute-based regulation.

Objective 8: Develop a framework of recommendations for improving construction H&S regulation in Nigeria based on empirical data and analysis.

Analysis of respondents’ opinions on improving H&S regulation, the barriers, constraints, motivators, drivers and attitudes towards H&S self-regulation helped to develop a framework of recommendations; this was evaluated by practitioners and academics, after which it was revised. This is already discussed in Sections 10.6 and 10.7 and the recommendations noted in the next Section, 11.2.

11.2 RECOMMENDATIONS FOR IMPROVING CONSTRUCTION H&S REGULATION IN NIGERIA

The author proposes the following for improving construction H&S regulation in Nigeria:

- A. Professional bodies and H&S campaigners should pressure the government through international bodies such as ILO to support H&S legislation and practice.

- B. Policymakers should provide adequate contextualised construction H&S legislation which should require the following:
- I. Clients, including domestic clients should be responsible for H&S, but the domestic client can delegate the responsibilities to the contractors in writing.
 - II. Mandatory H&S courses or modules in schools by requesting that the Ministry of Education and Professional bodies such as COREN, CORBON that accredit schools should make it one of the criteria for accreditation of schools.
 - III. Establishment of a homogeneous H&S regulatory system involving a central independent construction H&S regulator, the industry and H&S crusaders. The latter two can act as whistle-blowers, monitor the activities of the central independent construction H&S regulator, for instance requesting information on their enforcement frequency. The industry can also go ahead and regulate the contractors but their standards should not be below that of the contextualised construction H&S laws. Above all, the central independent construction H&S regulator should oversee the homogeneous H&S regulation, enforce and monitor the contextualised construction H&S laws. The mixed form of legislation (prescriptive and goal-based) is also recommended alongside, private and public regulation. The state, perhaps through legislation, or the regulator specifying certain secondary legislation, and organisations are to formulate adequate policies, risk management systems to achieve compliance.
 - IV. Charge the central independent construction H&S regulator with providing education, guidance and H&S information free of charge to the public, including through a website and social media, encouraging social networks. Professional bodies can be vital parts in this case.
 - V. Compulsorily register all construction projects with the central independent construction H&S regulator for effective enforcement and compliance. The registration can be online or in person. The notification should be once projects are stopped for more than two weeks, recommenced, and completed.
 - VI. Mandatory H&S responsibilities for designers, and employers where the main contractor is viewed as an employer of the subcontractors.
 - VII. Each construction project should be under the supervision of a certified H&S consultant, with stronger punitive measures for non-compliant clients.
 - VIII. A percentage of the contract sum of every project allocated to H&S by clients.

- IX. Independent H&S competency bodies, which will have a database of contractors who have been assessed for their H&S competence.
- C. Policymakers should establish an independent offshoot of EFCC and ICPC to act as a ‘watchdog’ on the activities of the independent construction H&S regulator but with adjunct monitoring by the media and professional bodies.
- D. Policymakers should ensure that communities and social actors do not take laws into their own hands but can sponsor legal action in terms of H&S and support the activities of the central independent construction H&S regulator through whistleblowing. Community leaders should be accountable for uncontrolled H&S regulation within their communities.
- E. Academics should include the moral and cultural arguments in H&S teachings.
- F. The enforcement activities of the central independent construction H&S regulator should not centre on only inspections and sanctions, rather in addition to education and awareness, there should economic incentives to encourage and motive self-compliance.

11.3 VALIDATION OF RESEARCH FINDINGS

In addition to refining the interview protocol, triangulations, peer debriefing, and steps to address investigator effects, the steps below have also been taken. The framework of recommendations has been evaluated and the methods outlined in Sections 6.8.4.1 and 10.7, and the summary of the feedback from the respondents (academics and practitioners) is noted in Section 10.7.

Table 11.1: Outputs: location of publications resulting from the research. Source: The author’s elaboration

Refereed Journals	
• Architectural Engineering and Design.	
• Journal for the Advancement of Performance Information and Value.	
• Journal of Engineering, Design and Technology	
• International Journal of Construction Education and Research.	
• Journal of Construction Project Management and Innovation.	
• Engineering, Construction and Architectural Management.	
• Civil Engineering Dimension	
Refereed Conferences	
	Year
• 3 rd International Conference on Infrastructure Development in Africa, (ICIDA)	2014
• CIB W099 International Health and safety Conference	2015
• Plymouth University’s Faculty of Business 10 th Annual Ph.D conference	2015
• 9 th Construction Industry Development Board (CIDB) Postgraduate Conference	2016

Also, experts and peers have evaluated the framework of analysis (Section 5.3.1), and some findings, academically validated through the publication of academic papers. Manu (2012) argues that publishing research finding in refereed conferences, journals and workshops contributes to validating research findings. This is because of the rigorous peer review process that such academic publications undergo; the academic community scrutinises methodologies, arguments and findings of these papers (Manu 2012). Table 11.1 presents the refereed conferences and journals where the 14 selected papers relating to the research (that are listed in pages xv–xvi) are published and presented.

11.4 CONTRIBUTION TO KNOWLEDGE AND PRACTICE

11.4.1 Theoretical contribution

The findings of this study provide unique insights into the current realities of construction H&S regulation in Nigeria, by implication including compliance with H&S laws, evidencing that the industry is self-regulated and not unregulated. The key issues emerging from the study advance the understanding of the voluntary, non-state actors-led, and local/international statutes-based H&S regulation, the determinants and the attitudes of the contractors towards them from a Nigerian perspective. The finding of the study that it is simplistic to assume that the sole explanation/differentiating feature of contractors that engage in H&S is their size or structure of ownership is significant.

The general findings of the study have direct implications for Nigeria's construction industry, as the findings are not based on copying or transposing tools or theories from developed countries. This can form the basis for developing regulatory strategies and H&S laws that are tailored to the Nigerian context. In the broader context, the findings on attitudes and approaches to H&S regulation indicate what may obtain in countries or industries with distributed regulatory system. Also, the findings (e.g. the 'power relationship' explanation for self-regulation, and the community-led self-regulation) have theoretical implications for regulatory affairs in other industries or countries, expanding compliance theories. Socio-legal scholars could benefit from the theories including the framework for analysing and understanding compliance behaviours or self-regulation. The study is a good contrasting standard for regulation; it can encourage and reinforce the existing effective H&S regulatory systems in other

sectors/countries. The study provides insight into multiple self-regulatory approaches that can exist in an industry or a country and the complex interactions, and a complex regulatory environment.

The extensive literature review in this study shows that the realities of construction H&S regulation in Nigeria is poorly understood. The industry has been viewed as unregulated. Also, in broader terms, little or no self-regulatory determinant studies have considered the environments that organisations operate in and its influence on self-regulation, including compliance with laws. This study fills the above gaps.

11.4.2 Framework for improving construction H&S regulation

The findings of this study have the theoretical implications of a contextualised content framework of recommendations for effective H&S regulation in Nigeria's construction industry. Thus, a framework of recommendations was developed which is unique to the Nigerian construction industry in terms of H&S regulation. This is the first record of such in H&S regulation in Nigeria. Nonetheless, it is hoped that the framework will be beneficial to socio-legal scholars in general, other industries, and researchers both in developing and developed countries

11.4.3 Contribution to methodology and to field of study

Using the qualitative survey is a contribution to academia in general but a significant contribution to the West African construction research especially Nigeria, and H&S. There is plenty of evidence that qualitative strategies are underadopted in some academic disciplines including the built environment disciplines of some developing countries such as Nigeria (Carter & Fortune 2004; Dainty 2007; Ejohwomu & Oshodi 2014; Laryea & Leiringer 2012; Loosemore et al. 1996). This has inspired two studies, one of which is Umeokafor and Windapo (2017), where the author of this thesis is the principal investigator. The study focuses on understanding the underrepresentation of qualitative strategies in Nigeria's built environment. The author's knowledge and skills of not only qualitative methods but also research have improved as a result of this study; these will advance his research career.

In terms of H&S, in reviewing PhD publications research in seven building and quantity surveying departments of Nigeria universities from 1984–2012, Ejohwomu and Oshodi (2014) shows that H&S remains underexplored. This is consistent with studies such as Kukoyi and Smallwood (2017), and Puplampu & Quartey (2012) who acknowledge the dearth of H&S literature in other developing countries. Additionally, the literature review in Section 3.3.1 reveals a dearth of construction H&S literature in Nigeria especially in the area of construction H&S law and regulation and the over-reliance on quantitative methods. These also form the premise of the current study's contribution to the field of study.

11.4.4 Contribution by publication

In the course of this research, the author has produced a lot of academic publications. These include both refereed conference and journal papers on pages xv–xvi. One of the publications produced a framework for analysing the determinants of construction H&S self-regulation, which can also be used for analysing compliance behaviours.

11.4.5 Contribution to practice

Businesses/investors in Nigeria and other countries including the UK, intending to invest in Nigeria now have a deeper understanding of the contextual environment of Nigeria and its implications for H&S, the determinants of construction H&S self-regulation and the attitude of contractors towards it. This would help them make informed decisions, strategies and policies. Policymakers in Nigeria can use the frameworks (of recommendations and the current realities of H&S regulation) as a stepping-stone to improving H&S in Nigeria. Academics can draw on the findings of the study for curricula development. The roles and contributions of clients, contractors, communities, and the government in H&S regulation and its improvement are established in the study.

11.5 RESEARCH LIMITATIONS

- The attitudes of other stakeholders, such as designers, towards construction H&S self-regulation were not examined; this may have offered further insight into the discourse.

- Recruiting participants from SMEs for the study was a challenge as some considered the topic to be sensitive. Some refused to take part in the study, fearing that they would be exposed despite the assurance of anonymity.
- Just like other qualitative studies, it is hard to tell if the responses of the respondents are a true reflection of what happens in their organisations. However, the triangulation processes and the constant comparison helped improve the trustworthiness of the research.
- The multiplex regulatory approaches may mean that some determinants may depend on the self-regulatory approach hence adopting a holistic approach to understanding the determinants may not be a true reflection of the reality. A counter argument can be that contractors can engage in various regulatory approaches at various times; hence, it is challenging to address the subject individually in terms of various approaches. Consequently, it can be argued that the study is about understanding the reality hence the holistic approach is adequate.
- Not collecting data from communities who have been involved in community-led regulation suggests that data may be skewed against members of the communities. However, some respondents are locals (from the communities) alongside working for contractors or participated in the study as key informants. Nevertheless, triangulating the data contributes to improving the reliability of the research. It can be argued that there may be room for further exploration of the subject but not implying that the results of current study are not reliable.

11.6 SUGGESTED AREAS OF FURTHER RESEARCH

- Although the study shows the influence of factors on H&S self-regulation, the level of influence of the factors over each other is an area that requires further investigation; an experimental study will be ideal.
- As there is little or no evidence of contextual factors from the cultural, institutional, political, and social environments directly influencing some direct determinants of construction H&S self-regulation (Figure 8.1, Section 8.6), further studies are recommended in this regard. The further studies can compare the implications (if any) of the direct factors with little or no evidence of direct influences from the aforesaid external environment and the direct factors with

direct influences from the external environments. Additionally, further studies can include examining the extent that contractors (for example, CSRCs, NCSRCs, Non-SRCs) can influence or control the direct factors with and without influence from the aforesaid contexts, or the extent of their impact on contractors in terms of construction H&S self-regulation.

- As a result of the limitation relating to the community-led H&S self-regulation, understanding it may be advanced if it is further explored. A case study involving interviews and observations may be ideal for this.
- Although two of the journal publications that this research produced (Umeokafor 2016, 2017a), assess the level of effectiveness of some self-regulatory approaches and the extent of influence of some drivers and barriers to H&S self-regulation, as Umeokafor (2016, 2017a) are scoping studies, further survey is recommended. The survey should also assess the secondary factors of H&S self-regulation.
- As the recommendation of a homogeneous regulatory system, which combines two regulatory strategies, reflectivity and tripartism 'lite', is based on respondents' views, author's opinions, and analysis, further research can examine the all of them. This can include examining the challenges, opportunities and the methodology of operation and more importantly, transparency.
- As the study has not examined the attitudes of other stakeholders, for example, designers (consultants), as a standalone research question, further research is recommended. However, it can be argued that designers who are also contractors also made up the sample of the study.

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APPENDICES

APPENDIX A

LETTER FOR PARTICIPATION IN PILOTING THE INTERVIEW GUIDE

Dear Prof/Dr/Engr/Mr/Mrs/Ms,

My name is Nnedinma Umeokafor, a doctoral student at the University of Greenwich. I have attached a draft of my interview guide for your critique. Prior to conducting the interviews, I will be sending a letter to the participants requesting that they take part in the study. The University of Greenwich Research Ethics committee has approved the letter.

The purpose of the interview is to obtain the opinions of the respondents on the value that the Nigerian construction industry holds for occupational health and safety (OHS) self-regulation and to unearth its determinants. It will also help in understanding what the determinants of OHS self-regulation mean to the construction industry.

I designed a framework for analysing the determinants of OHS self-regulation in the construction industry. As such, some of the questions in the interview guide are designed based on the framework.

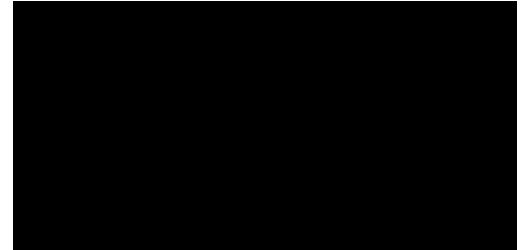
Based on your experience, I believe that you are in a good position to offer developmental feedback on the ability of the interview to achieve the aim of the study.

Regards,

Nnedinma Umeokafor
Research Student
Department of Built Environment
Faculty of Architecture, Computing & Humanities
University of Greenwich
Email: un08@gre.ac.uk

APPENDIX B

REQUEST FOR PARTICIPATION IN THE RESEARCH: A SAMPLE OF THE LETTER



Department of Built Environment

Direct line: 020 8331 9100

Email: un08@gre.ac.uk

Date: 20-09-14

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

Re: REQUEST FOR PARTICIPATION IN A RESEARCH PROJECT.

My name is Nnedinma Umeokafor, a PhD Student at the Department of Built Environment, Faculty of Architecture, Computing & Humanities, University of Greenwich, London.

I write to ask you to participate in a research project that seeks to understand health and safety self-regulation in the construction industry, considering internal and external environmental influences. Participation will be through interviews to elicit your views on the approaches, determinants, and attitudes of Nigerian construction contractors towards H&S self-regulation. This will help in achieving the second main aim of this study, which is to develop a content framework of recommendations for effective policymaking, improving the regulation of H&S in Nigeria's construction industry.

Dr Konstantinos Evangelinos, Dr Shaun Lundy and Prof David Isaac of the University of Greenwich are supervising the research project. Contact details below:
Dr Konstantinos Evangelinos: Department of the Built Environment, Faculty of Architecture, Computing and Humanities, University of Greenwich, Avery Hill Campus, Mansion Site, Bexley Road, Eltham, LONDON SE9 2PQ. ek22@gre.ac.uk.
You can participate in this research project by taking part in interviews. The interviews will take about 1hour–1hour 30 mintues or a little over.

You should, however, understand that you could withdraw from participation at anytime during the interview. You can also request for the information you provided to be withdrawn within 2 months of the interview. According to research ethics, anonymity will be ensured while using the information you will provide. The information will be strictly confidential and solely used for research purposes. However, if the regulating authorities request for the information, it will be provided to them. Also, if any highly sensitive information is provided such as concealed death or serious injuries to persons due to breach of occupational safety and health regulations, it will be passed to the relevant authorities.

If you choose to participate in the interviews, please tick circle.

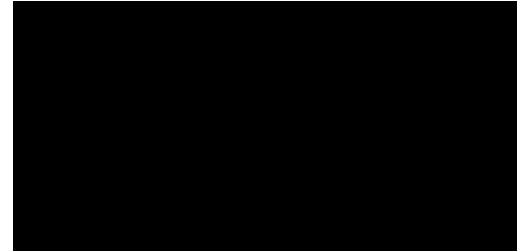
You contact me on the email below or by post on the address below.

Yours sincerely

Nnedinma Umeokafor
Research Student
Department of Built Environment
Faculty of Architecture, Computing & Humanities
University of Greenwich
Avery Hill Campus, Mansion Site, Bexley Road,
Eltham,
LONDON
SE9 2PQ
Email: un08@gre.ac.uk

APPENDIX C

INTRODUCTORY LETTER TO INTERVIEW CONSTRUCTION CONTRACTORS



Department of Built Environment

Direct line: 020 8331 9100
Email: un08@gre.ac.uk
Date: 05-01-15

Address of interviewee

Dear Sir/Madam,

Re: Introductory letter for construction contractors

Following my first letter or email inquiring of your interest in taking part in a research project, I wish to thank you for agreeing to take part in the study. It is vital to remind you that the purpose of this interview is to obtain your opinions on the approaches, determinants, and attitudes of Nigerian construction contractors towards H&S self-regulation. This will help in achieving the second main aim of this study, which is to develop a framework of recommendations for effective policymaking, improving the regulation of H&S in Nigeria's construction industry.

Dr Konstantinos Evangelinos, Dr Shaun Lundy and Prof. David Isaac all of the University of Greenwich are supervising the research project. Contact details: Dr Konstantinos Evangelinos: Department of the Built Environment, Faculty of Architecture, Computing and Humanities, University of Greenwich, Avery Hill Campus. Mansion Site, Bexley Road, Eltham, LONDON SE9 2PQ. ek22@gre.ac.uk

More importantly, as stated in the first letter, you should, however, understand that you could withdraw from participation at anytime during the interview. You can also request for the information you provided to be withdrawn within 2 months of the interview. Adhering to research ethics, anonymity will be ensured while utilising the information you will provide. The information will be strictly confidential and solely used for research purposes. However, if the regulating authorities request for the

information, it will be provided to them. Also, if any highly sensitive information is provided such as concealed death or serious injuries to persons due to breach of occupational safety and health regulations, it will be passed to the relevant authorities.

This interview session will take about 1 hour –1 hour 30 minutes. I would also wish to obtain permission from you to record this interview with a tape recorder. This will enable efficient qualitative data gathering and analysis of the information.

Yours sincerely

Nnedinma Umeokafor
Research Student
Department of Built Environment
Faculty of Architecture, Computing & Humanities
University of Greenwich
Avery Hill Campus, Mansion Site, Bexley Road,
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APPENDIX D

SAMPLE OF INTERVIEW GUIDE FOR CONSTRUCTION CONTRACTORS

INTRODUCTION

The interviewer will introduce the topic to the interviewee. H&S self-regulation is the process whereby construction contractors develop or adopt policies and/or standards so as to control and manage the risks and hazards in the workplace.

SECTION 1: PROFILE OF ORGANISATION AND RESPONDENT

1. How many years of experience do you have in the construction industry?
2. What is your academic background?
3. Can you comment on how your role relates to H&S in the organisation you work?
4. Can you tell me about your company?

SECTION 2: APPROACHES AND ATTITUDES TOWARDS H&S SELF-REGULATION

1. Does your organisation develop or adopt and administer standards or strategies to prevent or control harm to people in the workplace?
 - 1.1 If no, what are the explanations for your organisation not engaging in (the above), H&S self-regulation? (Then go to question 3)
2. How does your organisation develop or adopt and administer standards or strategies to prevent or control harm to people in the workplace?
 - 2.1 How does your organisation go about H&S once they are awarded a contract (if not answered above)?
 - 2.2 How does your organisation go about H&S when bidding for contracts (if not answered above)?
 - 2.3 In your experience, if your organisation adopts H&S laws from other countries and administer them, can you explain how this happens (if not answered above)?
 - 2.4 In your experience, when a client stipulates that your organisation adopt laws or even the national building code and administers them, how does your organisation regulate H&S in the project?
 - 2.5 Have you worked on any construction project in Lagos state? If yes, how does the H&S regulation of your organisation and projects occur there?
 - 2.6 Have you worked on construction projects in industries that take H&S seriously, for example, the oil and gas, banking and telecommunication industries? If yes, how does the H&S regulation of your organisation and projects occur there?
 - 2.7 In what other ways do H&S regulation of your organisation or projects occur?
3. How does your organisation views H&S self-regulation?

4. Explain how the understanding of your organisation described in question 3 influenced or not influenced regulating H&S in your organisation?
5. If applicable, how has the understanding of your organisation of (not) prioritising H&S against other project objectives such as cost influenced or not influenced regulating H&S in your organisation?
6. If applicable, how has the understanding of your organisation of accepting H&S regulation as a responsibility influenced or has not influenced regulating H&S in your organisation?

SECTION 3: DETERMINANTS OF H&S SELF-REGULATION

1. In your experience, describe the barriers (e.g. lack of funds) that your organisation encounter in terms of H&S self-regulation? (if answered in question 1.1 of Section 2 go to question 3)
 - 1.1. How does the most significant of these barriers hinder H&S self-regulation in your organisation?
2. In your experience, can you describe what makes your organisation to self-regulate in H&S (e.g. low level of accident thus increased productivity).
 - 2.1 How does the most significant of these factors drive H&S self-regulation in your organisation?
3. How has the socio-cultural environment of Nigeria (for example, family values, religion) influenced your organisation in H&S regulation (if not answered in other questions)?
4. How has the institutional environment of Nigeria (for example, the dysfunctional H&S regulatory environment) influenced your organisation in H&S regulation (if not answered in other questions)?
5. How has the political environment of Nigeria influenced your organisation in H&S regulation (if not answered in other questions)?
6. How have other 'Nigerian factors' influenced H&S regulation in your organisation?

Section 4: Evaluating the determinants of H&S self-regulation

1. In your experience, how has the preference for corporate economic gain influenced or not influenced your organisation to self-regulate H&S (if not answered in other questions)?
2. In your experience, how has the concern of doing what is right or wrong (i.e. morality) influenced or not influenced your organisation's decision making on the self-regulation of H&S (if not answered in other questions)?
3. In your experience, how has the capacity of your organisation influenced or not influenced its ability to self-regulate H&S (if not answered in other questions)?

4. In your experience, how have matters that concern the market that your organisation trades in (if any) influenced or not influenced H&S self-regulation in your organisation (if not answered in other questions)?
5. Based on your experience, how have regulatory matters (e.g. the nature of the legislation, regulatory efforts) (if any) influenced or not influenced your organisation to self-regulate H&S (if not answered in other questions)?
6. Based on your experience, how has external pressure (e.g. from clients, public interest groups, the media) (if any) influenced or not influenced your organisation to self-regulate H&S (if not answered in other questions)?
7. Based on your experience, how has social legitimacy (i.e to gain a high level of acceptability in the society) influenced or not influenced your organisation to self-regulate H&S (if not answered in other questions)?
8. Based on your experience, how has the ability of your organisation to influence or control events in the society (e.g through 'connection' or financial power) influenced or not influenced your organisation to self-regulate H&S (if not answered in other questions)?
9. How do you think H&S regulation can be improved in the Nigerian construction industry?
10. Are there other things you would want to add?

Thank you for your time. I may have to contact you again in the course of this study if need be, if you are happy with that. If you want me to send you an electronic copy of the findings of this study, please let me know.

APPENDIX E

INTRODUCTORY LETTER TO KEY INFORMANTS IN THE CONSTRUCTION INDUSTRY



Department of Built Environment

Direct line: 020 8331 9100

Email: un08@gre.ac.uk

Date: 05-01-15

Address of interviewee

Dear Sir/Madam,

Re: Introductory letter for key informants in the construction industry

Following my first letter or email inquiring of your interest in taking part in a research project, I wish to thank you for agreeing to take part in the study. It is vital to remind you that the purpose of this interview is to obtain your opinions on the approaches, determinants, and attitudes of Nigerian construction contractors towards H&S self-regulation. This will help in achieving the second main aim of this study, which is to develop a content framework of recommendations for effective policymaking, improving the regulation of H&S in Nigeria's construction industry.

Dr Konstantinos Evangelinos, Dr Shaun Lundy and Prof. David Isaac all of the University of Greenwich are supervising the research project. Contact details: Dr Konstantinos Evangelinos: Department of the Built Environment, Faculty of Architecture, Computing and Humanities, University of Greenwich, Avery Hill Campus. Mansion Site, Bexley Road, Eltham, LONDON SE9 2PQ. ek22@gre.ac.uk

More importantly, as stated in the first letter, you can withdraw from participating in the interview at anytime. You can request for the information you provided to be withdrawn two months from the date of this interview. Adhering to research ethics, anonymity will be ensured while utilising the information you will provide. The information will be strictly confidential and solely used for research purposes. However, if the regulating authorities request for the information, it will be provided to them. Also, if any highly sensitive information is provided such as concealed death or serious injuries to persons due to breach of occupational safety and health regulations, it will be passed to the relevant authorities.

This interview session will take about 1 hour –1 hour 10 minutes. I would also wish to obtain permission from you to record this interview with a tape recorder. This will enable efficient qualitative data gathering and analysis of the information.

Yours sincerely

Nnedinma Umeokafor
Research Student
Department of Built Environment
Faculty of Architecture, Computing & Humanities
University of Greenwich
Avery Hill Campus, Mansion Site, Bexley Road,
Eltham,
LONDON SE9 2PQ
Email: un08@gre.ac.uk

APPENDIX F

SAMPLE OF INTERVIEW GUIDE FOR KEY INFORMANTS IN THE CONSTRUCTION INDUSTRY

SECTION 1: INTRODUCTION

The interviewer will introduce the topic to the interviewee. H&S self-regulation is the process whereby members of the construction industry develop or adopt policies and/or standards so as to control and manage the risks and hazards in the workplace.

SECTION 1: PROFILE OF ORGANISATION AND RESPONDENT

1. How many years of experience do you have in the construction industry or working with the industry?
2. What is your academic background?
3. Can you describe your organisation's involvement in H&S matters in the Nigerian construction industry (If applicable)?

SECTION 2: APPROACHES AND ATTITUDES TOWARDS H&S SELF-REGULATION

1. In your opinion, how does the H&S regulation of construction contractors or projects in Nigeria occur?
2. How do Nigerian construction contractors develop or adopt and administer standards, policies or strategies to prevent or control harm to people in the workplace (if not answered in other questions)?
3. Can you describe how H&S regulation occurs in the Lagos State construction industry (if not answered in other questions)?
4. How does H&S regulation occur in construction projects in any of these industries: oil and gas, banking and telecommunication (if not answered in other questions)?
5. How does construction contractors view H&S self-regulation? For example Igbos are viewed to like money?
6. How do the views of construction contractors described in question 5 influence or not influence the self-regulation of H&S?
7. In your experience, how has the understanding of construction contractors of (not) prioritising H&S against other project objectives such as cost influenced or has not influenced self-regulating H&S (if applicable)?

8. In your experience, how has the understanding of construction contractors of accepting H&S as a responsibility influenced or not influenced the self-regulation of H&S (if not answered in other questions)?

SECTION 3: DETERMINANTS OF HEALTH AND SAFETY SELF REGULATION

1. In your experience, describe the barriers (e.g lack of funds) to construction contractors engaging in H&S self-regulation.
2. In your experience, explain what makes construction contractors to engage in H&S self-regulation (e.g. increased productivity due to a low level of accident)?
3. How has the socio-cultural environment of Nigeria (for example, family values, religion) influenced or not influenced construction contractors in H&S regulation (if not answered in other questions)?
4. How has the institutional environment of Nigeria (for example, the dysfunctional H&S regulatory environment) influenced or not influenced construction contractors in H&S regulation (if not answered in other questions).
5. How has the political environment of Nigeria influenced or not influenced contractors in H&S regulation (if not answered in other questions).

SECTION 4: EVALUATING THE DETERMINANTS OF H&S SELF-REGULATION

1. In your experience, how has the quest for corporate economic gain made or not made construction contractors to engage in H&S self-regulation?
2. In your experience, can you describe where construction contractors will self-regulate or not because they view it as the right or wrong thing to do — H&S self-regulation?
3. In your experience, how has social legitimacy influenced or not influenced construction contractors in H&S self-regulation?
4. Based on your experience, how has the ability of contractors or their clients to influence events in the society (e.g political influence) influenced or not influenced their decision to self-regulate H&S?
5. Based on your experience, how has the capacity of construction contractors influenced or not influenced its ability to self-regulate?
6. Based on your experience, how have regulatory matters (e.g. nature of the legislation, regulatory efforts) influenced or not influenced contractors' ability to self-regulate?

7. If not answered in other questions; in your experience, can you state which of the following has mostly influenced or not influenced Nigerian construction contractors in H&S self-regulation thus:

- Matters that concern the market in which contractors trade?
- External pressure, for example, from clients, public interest group, the media, and politics?


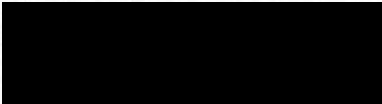
Please can you explain?

8 How do you think that H&S regulation can be improved in the Nigerian construction industry?

Thank you for your time. I may have to contact you again in the course of this study if need be if you are happy with that. If you want me to send you an electronic copy of the findings of this study, please let me know.

APPENDIX G

LETTER OF ACCEPTANCE TO SUPPORT THE RESEARCH PROJECT

	Federation of Construction Industry (FOCI) RC 1206
ABUJA OFFICE: House Number 8, M.A. Sanusi Street, Foreign Affairs Quarters, Off First Avenue, Gwarinpa, Federal Capital Territory. Tel: 09-291837	LAGOS OFFICE: CONSTRUCTION HOUSE , 18, Adeyemo Alakija Street, Victoria Island, G.P.O. Box 282, Lagos. Tel: 01-4616696, 4628618.
E-mail: focinigeria@hotmail.com Website: www.focinigeria.com	
Our Ref: FED/MISC/13/2015/OA/SAO	12th February 2015
Mr. Nnedinma Umeokafor University of Greenwich Department of Built Environment Faculty of Architecture Computing & Humanities United Kingdom.	
Dear Sir,	
<u>RE: REQUEST FOR PARTICIPATION IN A RESEARCH PROJECT</u>	
We refer to your e-mail dated 21 st January 2015 requesting for our assistance in a Research Project you have embarked on.	
We are pleased to inform you that FOCI is willing to assist you with your request for a list of our Members.	
However, we request that you acknowledge our Organization in your dissertation.	
Best wishes.	
	
OLUBUNMI ADEKOJE (MRS) DIRECTOR GENERAL	
<small>Bldr. Solomon Ogunbusola (JP) (President) Mr. Moses Anite (Deputy President) Engr. A. O. Nwodika (Vice President) Mrs. O. Adekoje (Director General)</small>	