Construction Contractors' Compliance to Health and Safety Insurance Policies in Lagos State

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Construction workers are continuously liable to health and safety issues which pose major problems and concerns to productivity in the construction industry. Despite availability of health and safety policies with specific insurance and risk management considerations; injuries, fatalities and death from construction related activities appear unabated, which suggests possible non-compliance of contractors to established health and safety regulations. This study examines contractors' compliance to health and safety insurance policies in Lagos State, with a view to stemming high risks of hazard occurrence. Survey research design was adopted and data were collected using questionnaires. Descriptive statistics was used for the analysis. Results show that there is a significant difference in the awareness of contractors on health and safety insurance policies for construction projects. Furthermore, results show that there is a significant difference in the level of compliance to Health and Safety policies between foreign/multi-national and indigenous construction firms. Based on these findings, it was recommended that there should be continuous enlightenment by the regulatory agencies on insurance policies to increase the level of awareness of contractors on health and safety insurance policies for construction project. Also, stakeholders in the industry should initiate modalities for monitoring contractors' compliance to identified health and safety insurance policies in Lagos State, thereby fostering a high level compliance and also ensuring consistency in compliance.

Keywords: Contractor, construction, health and safety, insurance policies, productivity

INTRODUCTION

Building construction activities in most developing countries is labour intensive and involves working at heights, underground, confined spaces, handling loads manually, handling hazardous substances, exposure to noises, dusts, power/electrical cables and use of plants and equipment (Ahmed, 2008). Apart from providing employment for those directly involved with construction and other economic benefits offered by the building industry, the activities nonetheless pose severe health and safety hazards to the workers (Farooqui, Arif & Rafeeqi, 2008). More so, there is the risk of building collapse that could endanger not only the lives of the workers but users of such facilities (Ahmed, 2008). Studies have established that a wide disparity exist in occupational accident rates between developed and developing countries (Hamalainen, Takala & Saarela, 2006). There are three times as many fatalities on construction sites in developing countries than in the industrialized ones (HSE book, 2006; King & Hudson, 1985). In view of the inherent hazards related to building construction, Okeola (2009) established that health and safety being an inevitable aspect of construction should be a primary concern to building contractors.

Health and safety (H & S) in the Nigerian building industry is a critical concept that cannot be ignored especially in the light of persistent cases of building collapse. For example, notable cases of building collapse with high human casualties in Nigeria include: a church building that collapsed in Calabar during worship service in which over 50 lives were lost in 2015, a guest house under construction that collapsed within the premises of Synagogue Church of All Nations in Lagos killing over 120 people in 2015, a five storey Lekki Garden building that collapsed leaving over 35 persons dead and several others injured in 2016. While writing this paper, another building under construction collapsed in the Federal Capital Territory (FCT) Abuja leaving many of the workers buried in the rubbles. There are several others cases of building collapse throughout Nigeria that were not reported. Aksorn, and Hadikusumo (2007) opined that the high risks of hazards occurrence in building construction need to be well prepared for before actual occurrence. As it were, insurance policies play a significant role in instilling health and safety consciousness in the building sector, insuring against liability for injury arising out of hazardous nature of building construction. H&S consciousness will compel contractors to comply with policies and regulations that will significantly help in controlling the rate at which hazardous events unfold, while violation of laid down rules as established by policies has its contributory effect towards increased rate of hazardous event during a construction process. Lee and Halpin (2003) reported that in many of the countries where safety legislation exists, the regulatory authority is weak or non-existent and employers 'pay lip service' to regulation. Compliance of the contractors on what norms the policies postulates is most imperative in ensuring health and safety in the construction industry of developing countries. According to Lingard and Rowlinson (2005), in a bid to comply with insurance policies to avoid conflict with the law, contractors put in place measures which engender safety consciousness on construction sites. Such measures according to Idoro (2007) include holding regular health and safety training, having an up to date accident register, and ensuring that hazards are prevented.

Previous researches on health and safety in the construction industry centred around identifying prevailing types of accidents on construction sites (Abdul Rahim et al. 2008, Ohdo et al., 2011) and causes of accidents on construction sites (Hosseinian & Torghabeh, 2012; Ali, Kamaruzzaman, & Sing, 2010). However, internet search reveals nothing on contractors' compliance to health and safety insurance policies. It is against this background that this research sets out to examine the awareness of contractors on health and safety insurance policies for construction project, their level of compliance to health and safety policies and challenges facing local and foreign contractors in complying with health and safety insurance policies in Lagos, Nigeria.

LITERATURE REVIEW

Nigeria is adjudged the most populous country in Africa and also the largest economy in Africa (World Bank, 2016). The Nigerian construction industry plays an important role in the nation's economy. In 2017 the sector's contribution to

national Gross Domestic Product GDP stood at 3.77% (National Bureau of Statistics, 2018). In spite of the socio-economic significance of the construction sector, its reputation with reference to occupational health and safety is not pleasurable. This has been attributed to poor consideration for H&S management measures and practices in construction project delivery process (Belel & Mahmud, 2012). Despite being a party to the Geneva Occupational Safety and Health Convention 1981, Nigeria continues to lag behind in the implementation of occupational H&S practices (Adeogun & Okafor, 2013). According to Idoro (2011), even contractors with the best safety records in Nigeria still record substantially high number of injuries on sites. A survey of 42 Nigerian contractors revealed such poor performance rate of five injuries per worker and 2 accidents per 100 workers even among some of the best performing firms (Idoro, 2011). According to Ezenwa (2001), these figures are often even worse in practice as a result of a culture of under-reporting and concealment. Other studies have further highlighted a high prevalence of non-compliance with safety regulations that require organisations to report accidents (Diugwu et al. 2012). Whilst there have been occupational health and safety legislations governing work and work environments in Nigeria (e.g. Factories Act of 1990 and Employee's Compensation Act of 2011), some have attributed the poor safety performance to dysfunctional H&S laws and regulations (Diugwu et al. 2012).

Construction insurance is a practice of exchanging a contingent claim for a fixed payment to protect the interests of parties involved in a construction project (Ashworth 2001). Construction insurance is a major method of managing risks in the construction industry. Shola (2017) posits that its primary function is to transfer certain risks from clients, contractors, subcontractors and other parties involved in the construction project to insurers in order to provide contingent funding in time of difficulty. Purchasing the proper insurance can be one of the most important administrative decisions a contractor will make. It is necessary to first identify and describe the various insurance brands that are purchased in the construction marketplace, and to briefly describe what each type will generally cover.

Builder's Liability Insurance - Section 64 of the Insurance Act requires that every owner or contractor of any building under construction with more than two floors must take out an Insurance Policy to cover liability against construction risks caused by his or her negligence or that of his or her workers, agents or consultants which may result in death, bodily injury or property damage to workers on site or members of the public. This insurance policy also covers liability for collapse of buildings under construction.

Builder's Risk Insurance

Builder's Risk Insurance is a form of property insurance that protects the building or project against physical loss or damage from external causes during construction. The protection provided depends upon the terms of the written policy, but usually includes materials and supplies to be used on the project. These items are insured while held in temporary storage before delivery, during transit to the jobsite, and after delivery while awaiting installation (Clough, 1981). The hazards covered by this insurance vary. The policy may protect against loss due to fire, vandalism and miscellaneous mischief, lightning, wind, smoke, explosion, and other types of physical damage (this is the primary purpose of this insurance). Some common exclusion stated within the policy are damages due to freezing, explosion of steam boilers or pipes, glass breakage, subsidence and settling, earthquake and floods (Stokes, 1990).

Equipment Floater Insurance

Construction equipment and machinery used on the project is subject to damage and can be protected by what is known as an equipment floater policy. This policy covers equipment that moves from job to job (the equipment "floats"). The equipment covered, often referred to as off-road vehicles, is not licensed and includes dozers, scrapers, power shovels, loaders, cranes, pumps, and pavers. The major losses that typically occur are due to theft and vandalism. No liability component is attached as the policy only covers damage to the equipment (Hinze, 1990).

Key Man Insurance

Key Man Insurance is essentially a life insurance policy written on company principals. It will protect the company from heavy losses that may result from the death of

one or more principals (key men) of the firm. There may also be a clause that will provide benefit if a principal is disabled and unable to work (Hinze, 1990).

Automobile Insurance

There are two broad categories of risk involved when a contractor operates automobiles. First, there is loss or damage to the contractor's own vehicles caused by collision, fire, theft, vandalism, or other hazards. Second, there is liability for bodily injury to third parties or damage to their property caused in some way by the operation of the contractor's licensed vehicles. Automobile liability coverage will cover any vehicle fitting into one of three categories -owned automobiles, hired or rented automobiles, and non-owned automobiles such as employees' personal automobiles used in conjunction with official business. The coverage will provide for legal defence and payment of damages resulting from damage to persons or property due to the operation of vehicles fitting into one of the categories listed above (Stokes, 1990).

Worker's Compensation Insurance

Worker's compensation law was enacted to give statutory protection to employees injured on the job. Worker's compensation insurance provides medical care and other benefits for the contractor's employees in the event that they are injured on the job. The principle behind worker's compensation is that on-the-job injury or death of a worker is a cost of doing business and should be borne by the industry. The fundamental objective is for injured workers to receive prompt medical attention and monetary assistance. Another principle behind worker's compensation is that of strict liability of the employer, regardless of any fault by the employee. Contributory negligence of the employee will not affect the employer's liability, except in cases where the worker was under the influence of drugs or alcohol (Clough, 1981).

The insurance is required for most employees, i.e., exemptions include domestic servants, farm labour, casual employees, independent contractors, and workers in religious or charitable organizations. Also exempted in some states are businesses that employ less than a specified number of employees (Stokes, 1990).

In six states, known as "monopolistic fund" states, the insurance fund is run by the state. The contractor is required to purchase the insurance from the state rather than from a private insurer. In all other states the insurance can be bought like any other type of insurance (Stokes, 1990). Premiums are based primarily on three factors: the employer's safety experience on prior construction projects, the type of craft, and the geographic location. For the first factor, it is obvious that if a particular contractor has an outstanding safety record, the premiums will be lower than a contractor who has a poor safety record. An "experience modification rating" is assigned to each company that reflects the frequency of injuries and the monetary loss suffered over a three-year period. This rating is a multiplier that effectively raises or lowers the premiums. The second factor is associated with the craft, as this is related generally to the degree of risk involved. For example, a roofer has a higher degree of day-to-day risk than a concrete sidewalk installer. This difference results in various premium rates based on the industry loss history for each craft in the state. For the third factor, different states have varying injury experiences across all types of crafts. This results in some states having much higher premiums than others (Hinze, 1990).

RESEARCH METHOD

Survey method was considered suitable and adopted in this study. The population of the study comprises construction professionals in contracting and consulting organisations in Lagos State**.** The choice of these core respondents as the target population was on the basis that they are involved throughout the various stages of construction projects. Also, the study chose to be conducted in Lagos State on the premise that 75% of construction firms in Nigeria are either based in Lagos States or have their branches located in Lagos (Fagbemi, 2008). One hundred (100) construction professionals (contractors, architects, builders, quantity surveyors and engineers) in Lagos State were used as sample size for this study. The projected sample size was chosen as a result of unavailability of data of construction contractors who are involved with construction projects within Lagos
metropolis. This was backed up by Holloway (2007) which suggests that a sample size of about 100 respondents is appropriate for any

academic research**.** This research adopts a purposive sampling technique. The choice of purposive sampling technique was hinged on the fact that the study is directed towards a defined group of respondents who are best able to respond to the research issues. This helps the researcher in this study to take decision about the individual participants who are most likely to contribute appropriate data in terms of relevance and depth. Structured questionnaire was adopted in this study for data gathering. This research instrument was designed to capture the demographic data, and other data relating to the study objectives using appropriate measuring tools.

DISCUSSION

Demographic Characteristics of the Respondents

Table 1 shows the results of the demographic characteristics of the respondents. Out of the 134 respondents, 46 were engaged as contractors while 88 were engaged as consultants'/client representatives. Overwhelming percentage of the respondents from the two categories, 85% and 100% of contractors and consultant's/client representatives respectively were above 31 years old. In terms of their academic qualification, 31(67%) of contractors and 30(71%) of consultant's/client representative had a minimum of bachelor's degree in built environment related discipline. This implies that the respondents are quite knowledgeable in construction and know what is expected of contractors in terms of compliance to health and safety. With regards to their experience in construction works, 29(63%) and 38(90%) of contractor and consultant/client representative respectively had more than six years construction experience, which implies adequate exposure to construction activities.

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Table 1: Demographic Characteristics of the Respondents

	Contractors		Client/Consultants		Total	
Demographic Variables	**F**	**%**	**F**	**%**	**F**	**%**
Age group						
18- 30	7	15.3	-	-	7	8.0
31-40	30	65.2	23	54.8	53	60.2
41-50	9	19.6	16	38.1	25	28.4
51 and above	-	-	3	7.1	3	3.4
Highest level of education						
OND	-	-	3	7.1	3	3.4
HND	15	32.6	9	21.4	24	27.3
B.Sc/B.Tech/B.Eng	14	30.4	20	47.6	34	38.6
M.Sc/M.Tech/ M.Eng	14	30.4	9	21.4	23	26.1
Others	3	6.5	1	2.4	4	4.5
Years of Construction Experience						
1-5 years	17	37.0	4	9.5	21	23.9
6-10 years	11	23.9	9	21.4	20	22.7
10-15 years	12	26.1	21	50.0	33	37.5
15-20 years	6	13.0	2	4.8	8	9.1
Above 21 years	-	-	6	14.3	6	6.8

Awareness on Health and Safety Insurance Policies for Construction Project

The level of awareness was measured on a 3-point Likert scale ranging from fully aware, partially aware and not at all aware. Results as presented in Table 2 show that Construction All Risks (CAR) insurance, Workers' Compensation Insurance and Employer's Liability Insurance are more reputable among the respondents than other insurance policies. Construction All Risks (CAR) usually provides cover against damage to the project under construction, inclusive of items in storage and in transit to the construction site, and materials

and equipment meant to be engaged in the implementation of the construction project. Workers' compensation insurance on the other hand is usually purchased by employers for the coverage of employment-related injuries and illnesses. It is an insurance coverage that covers lost wages and medical treatment resulting from an employee's work-related injury or illness and also covers services needed to help an employee recover and return to work. Employer's Liability Insurance is an insurance policy which covers the contractors in the event that a worker decides to sue for an accident sustained, or an illness suffered, in the cause of work. It usually protects employers from liabilities arising from disease, fatality, or injury to employees resulting from workplace conditions or practices. It also provides liability insurance for third-party bodily injury and property damage that may arise out of the construction operations.

Least ranked among the insurance policies are Personal Injury Liability Insurance, Completed Operations and Products Liability Insurance, and Operations-Premises Liability Insurance. Personal injury liability insurance is meant to cover the insured contractor from lawsuits filed over issues like defamation, libel and slander. It also protects against lawsuits involving false arrest, unlawful imprisonment and malicious prosecution related to construction projects implemented. Completed Operations and Products Liability Insurance on the other hand is a coverage that protects the insured contractor in the event of claims caused by project they have completed and delivered. Operations-Premises Liability Insurance ideally provides cover for any hazards that are likely to occur, or might cause harm to the business entity as a whole. Mahalingam and Levitt (2007) assert that one of the critical safety issues affecting compliance is low awareness.

Table 2: Awareness of Contractors on Health and Safety Insurance Policies for construction projects.

Insurance Policies	**Mean**	**Std. Deviation**
Construction All Risks (CAR)	2.35	0.431
Workers' compensation insurance	2.24	0.547
Employer's Liability Insurance	2.22	0.846
Builders Risk Insurance	2.2	0.630
Controlled Insurance Plan (CIP)	2.13	0.533
Contractual Liability Insurance	2.09	0.707
Professional indemnity insurance	1.98	0.742
Professional Liability	1.98	0.701
Umbrella Excess Liability Insurance	1.93	1.115
Explosion, Collapse, Or Underground Liability Insurance	1.93	1.087
Elevator Liability Insurance	1.76	0.828
Contractor's/Owner's Protective Liability Insurance	1.76	1.303
Personal Injury Liability Insurance	1.76	0.759
Completed Operations and Products Liability Insurance	1.74	0.977
Operations-Premises Liability Insurance	1.72	0.977

1= fully aware, 2= partially aware, 3= not at all aware, MS= Mean Score, N=Number of respondents (46)

Health and Safety Insurance Policies Frequently Used by Construction Firms in Lagos State

Respondents were asked to rate frequency of use of fifteen health and safety insurance policies identified from previous studies on a 5-point Likert scale using Never, Rare, Sometimes, Often and Always. The result presented in Table 3 indicate that Construction All Risks (CAR) Insurance, Employer's Liability Insurance, Professional Liability Insurance, Builders Risk Insurance, Professional indemnity insurance and Controlled Insurance Plan (CIP) all falls under the category of insurance policies sometimes used by the construction firms in Lagos State. Least ranked among the frequently used insurance policies are Umbrella Excess

Liability Insurance, Completed Operations and Products Liability Insurance, and Elevator Liability Insurance policies. This group of rarely used policies never the less have their relevance pertaining to construction activities. Umbrella Excess Liability Insurance has the potential of providing for unforeseen occurrences that could call for the contracting firm to bear financial liability. Elevator Liability Insurance is meant to provide coverage against loss due to legal liability for bodily injury resulting from maintenance, or use of elevators, escalators, lifts, or hoists. It is meant to cover medical treatment for injuries sustained on the job, lost wages due to injuries, and even death *benefits* to families of deceased member of staff. Completed Operations and Products Liability Insurance also provides coverage for the contractor should a claim arise traceable to work done for a client and the client is not satisfied with. Perhaps, one of the reasons why these policies are rarely used is because they could be categorized under CAR. Dunning (2009) posit that contractors' compliance to Health and Safety insurance policies in Building construction projects could be said to be on the low key in the Nigerian building industry.

Table 3: Health and Safety Insurance Policies Frequently Used by Construction Firms in Lagos State

Health and Safety Insurance Policies	**Mean**	**Std. Deviation**
Construction All Risks (CAR) Insurance	3.41	0.550
Employer's Liability Insurance	3.11	0.415
Professional Liability Insurance	3.09	0.544
Builders Risk Insurance	3.09	0.850
Professional indemnity insurance	3.04	0.617
Controlled Insurance Plan (CIP)	3.02	0.668
Workers' compensation insurance	2.96	0.634
Explosion, Collapse, Or Underground Liability Insurance	2.91	0.780
Contractual Liability Insurance	2.89	0.636
Operations-Premises Liability Insurance	2.83	0.759
Personal Injury Liability Insurance	2.63	0.517
Contractor's/Owner's Protective Liability Insurance	2.63	0.715
Umbrella Excess Liability Insurance	2.54	0.718
Completed Operations and Products Liability Insurance	2.46	0.894
Elevator Liability Insurance	2.39	0.705

*1= never, 2= rare, 3= sometimes, 4=often, 5= always***,** *MS= Mean Score, N=Number of respondents (46)*

Contractors' Compliance to Identified Health and Safety Insurance Policies in Lagos State

According to Lingard and Rowlinson (2005) compliance focus on applying measures designed to comply with legal requirements with the regulator being primarily more concerned with improved outcomes than prosecution results. Contractor compliance therefore deals with actions that contractors take to create a platform on which health and safety is ensured fostering a construction setting in which

workers will be trained and motivated to perform safe and productive construction work (Taylor, 2012). Contractors' compliance to 15 variables pertaining to H&S insurance policies were measured on a 5- point Likert scale ranging from "no compliance" (rated 1) to "full compliance" (rated 5). The results presented in Table 4 revealed that contractors fully complied with policies such as: providing a written H&S procedure in the organization, making H&S plan available before the commencement of any construction project in the organization, briefing the employees on H&S procedure prior to commencement of any day work, providing regular H&S training and making H&S procedure accessible to employees in the organisation. Cheyne, Tomás and Cox, (2002)

assert that compliance with policies in form of regulations, at individual level significantly help in controlling the rate at which hazardous event unfold, while violation of laid down rules has its contributory effect towards increased rate of hazardous event during a process. The results presented support Charles (2007) views that contractors are meant to be observant of safety rules and regulations on site, brief the project participants on the expected standards before commencing work on site, establish a medium for prompt and adequate communication of health and safety issues. Variables with low compliance include organization carry out health and safety evaluations and surveillance and giving prompt and adequate attention to communication of H&S issues to key players.

Table 4: Contractors Compliance to Identified Health and Safety Insurance Policies in Lagos State

	Mean	**Std. Deviation**
There is a written Health and Safety procedure in the organization	4.76	0.550
Health and Safety plan is made available before the commencement of any construction project in the organization	4.64	0.415
There is always health and safety briefing before commencement of any day work	4.6	0.544
Workers are adequately trained in Health and Safety	4.57	0.850
Health and Safety procedure are accessible to employees in the organization	4.57	0.617
There is strict monitoring of health and safety policy and proper keeping of safety records in the organization	4.48	0.668
Safety plan is made available specifically for each job, outlining how the safety aspects of the particular job will be managed	4.4	0.634
Organization always ensure the adequate provision of standardised health and safety devices for workers	4.36	0.780
There is notices on Health and Safety at conspicuous position in the organization	4.33	0.636
Observation of standing health and safety rules and regulations on site is enforced during construction	4.29	0.759
Suggestions and contribution made by employees on health and safety issues are promptly responded to	4.14	0.517
Scheduled reviews of health and safety standards at work site	4.14	0.715
There is continuous basic training and education in health and safety for workers in the organization	4.02	0.718
Organization carry out health and safety evaluations and surveillance	3.9	0.894
Attention is given to prompt and adequate communication of health and safety issues to key players	3.88	0.705

*1= No compliance, 2= Very low compliance, 3= Low compliance, 4= Moderate, 5= Full compliance***,** *MS= Mean Score, N=Number of respondents (42)*

Challenges Facing Contractors in Complying with Health and Safety Insurance Policies in Lagos State

Despite the good rate of compliance to H&S insurance policies claimed by the contractors, the study sought to identify certain challenges facing contractors in complying with H&S insurance policies in Lagos state. The result presented in Table 5 shows that on the part of the Indigenous Contraction Firms (ICF), cost implication of H&S policies (MS= 4.61), followed by Poor management commitment, Fear of not recouping investment in health and safety facilities and Poor leadership (MS=4.59 & 4.2) respectively. On the contrary, the Multinational Construction Firms (MMCF) rated Poor management commitment, Poor leadership Cost implication of H&S policies

respectively. It is interesting to note that both categories of firms have same challenges, the magnitude notwithstanding.

Health and safety insurance facilities truly attract additional cost to the contractor while such cost are categorized as sunk cost and are irrecoverable. The challenge of poor leadership is more so identified; when the leadership lack the ability to provide direction, and motivation for compliance with health and safety, compliance naturally becomes difficult. Leadership input is considered a significant factor in ensuring contractors comply with health and safety insurance policies. Idubor and Oisamoje, (2013) posit that compliance to and enforcement of occupational health and safety legislations have generally been described as poor having link with issues such as lack of concern, lack of accurate records and poor statutory regulations. According to Foo, (2006) the financial aspect is of utmost importance as nothing is free of charge in implementation of safety practices at construction sites and that someone has to pay for it. Patrick (2008) highlighted that there is an urgency to allocate a fraction of budget on the safety and health cost in the contract for both the public and private projects.

Least ranked are, Continuity in business with mean score of 3.7 from ICF perspective, while the same with mean score of 3.17 from MCF perspective; Time to time replacement of health and safety facilities had a mean score of 3.63 from ICF perspective, while Fear of not recouping investment in health and safety facilities had a mean score of 3.40 from MCF perspective; Lack of awareness followed with mean score of 3.46 from indigenous construction firms perspective while the same factor is similarly ranked with mean score of 3.33 from MCF perspective. Issues dealing in Fear of not recouping investment in health and safety facilities, Continuity in business, Time to time replacement of health and safety facilities, and Lack of awareness are noted as least challenges that contractors are faced with in complying with health and safety insurance policies. The thought of continuity in business therefore could become a challenge if the contractor is sceptical about continuity in business or have the future plan of quitting operation and shifting towards other lines of business. Investing into health and safety facilities in such situation may not appeal to the instinct of the contractor. Time to time replacement of health and safety facilities is another area of challenge while this cannot be overruled as facilities are been put to use from time to time. The continuous use of facilities would result in facilities losing value or depreciating and overtime facilities may not perform intended purpose any more, requiring that the facilities be replaced. The need for replacement of health and safety facilities therefore poses challenge for contractors complying with health and safety insurance policies. Of critical issue is the challenge of lack of awareness of the various insurance policies and the imperatives of complying with the policies. Contractors seem not aware of the importance of the need for complying with health and safety insurance policies. However, Odeyinka, (2000) posits that it is the principal responsibility of contractors in the building industry to be at the fore front of compliance with the laid down health and safety policies established by insurance.

Table 5: Challenges Facing Contractors in Complying with Health and Safety Insurance Policies in Lagos State

	ICFs Mean	Std. Deviation	MCFs Mean	Std. Deviation
Cost implication of health and safety policies	4.61	1.322	3.79	1.360
Poor management commitment	4.59	0.951	4.31	0.493
Fear of not recouping investment in health and safety facilities	4.2	0.964	3.4	0.885
Poor leadership	4.2	0.715	4.07	0.580
Absence of health and safety plan	4.13	1.311	3.64	1.104
Poor safety discipline	4.00	1.043	3.71	1.033
Absence of clearly stated safety rules	3.74	1.243	3.48	1.394
Continuity in business	3.7	0.973	3.17	0.859
Time to time replacement of health and safety facilities	3.63	1.167	3.48	1.133
Lack of awareness	3.46	1.254	3.33	1.435

1= Strongly Disagree, 2= Disagree, 3= Indifferent, 4= Agree, 5= Strongly Agree, TS= Total Score, MS= Mean Score

CONCLUSION AND FURTHER STUDIES

The purpose of this study was to examine contractors' compliance to health and safety insurance policies in Lagos State, with a view to stemming high risks of hazards occurrence. Survey questionnaires were administered on construction professionals in construction and contracting organizations within the construction industry in Lagos state. Results show significant difference in the level of awareness, and compliance of contractors to health and safety insurance policies between foreign and indigenous construction firms. The implication is that, adequate insurance cover will compel the insurance companies to strictly monitor the contractors' operations and enforce compliance thereby averting hazards to the workers and the projects and liabilities to the insurer.

REFERENCES

Abdul Rahim A, H, Muhd, Z, & Majid, B, S, (2008). Causes of Accidents at Construction Sites. *Malaysian Journal of Civil Engineering*. 20 (2), 242-259

Adeogun, B. K. & Okafor, C. C. (2013). Occupational Health, Safety and Environment (HSE) Trend in Nigeria. *International Journal of Environmental Science, Management and Engineering Research*, 2(1), 24 – 29.

Aksorn, T. & Hadikusumo, B.H.W. (2007). Gap analysis approach for construction safety program improvement. *Journal of Construction in Developing Countries*, 12(1), 77 - 97

Ali, A.S., Kamaruzzaman, S.N., & Sing, G.C. (2010). A study on causes of accident and prevention in Malaysian construction industry. Journal of Design + Built, 3, 95-113.

Belel, Z. A. & Mahmud, H. (2012). Safety Culture of Nigerian Construction Workers – A Case Study of Yola. *International Journal of Scientific & Engineering Research*, 3, (9), 2229-5518.

Cheyne, O. A., Tomás, J. M., & Cox, S. (2002). The Effects of Organizational and Individual Factors on Occupational Accidents. *Journal of Occupational and Organizational Psychology*, 75(4), 473 – 488.

Clough, R. H. (1981). Construction Contracting. 4th Edition New York: John Wiley & Sons Inc.

Diugwu, I. A., Baba, D. L., & Egila, A. E. (2012). Effective Regulation and Level of Awareness: An Expose of the Nigeria's Construction Industry. *Open Journal of Safety Science and Technology*, 2, 140 – 146.

Ezenwa, A. O. (2001) A study of fatal injuries in Nigerian factories. Society of Occupational Medicine. 51 (8), 485-489.

Fagbemi, A. O. (2008). Assessment of Quantity Surveyors' Service Quality in Lagos State,

Nigeria. *(Unpublished master's thesis) Department of Quantity Surveying*, Federal University of Technology, Akure, Nigeria.

Farooqui, R. U., Arif, F., & Rafeeqi, S.F.A. (2008). Safety performance in construction industry of Pakistan. Proceedings of the First International Conference on Construction in Developing Countries: Advancing and integrating construction education, research and practice (ICCIDC-1 2008), 74-87, Karachi, Pakistan,.

Foo, C. L. (2006). Budgeting for Occupational Safety and Health Management and Its Implementation. *Safety and Health 1st Quarter*, Master Builder Association, Malaysia.

Hamalainen, P., Takala, J., & Saarela, K. L. (2006). Global estimates of occupational accidents. Health and Safety Science, 44, 137-156.Health and Safety in Construction (*2006). HSE books* ISBN 978 0 7176 6182 2. A*vailable on line from* w www.hse.gov.uk/pubns/books/hsg150.ht

Hinze, J. (1990). Course notes for CETS 407, Contracts and Specifications. Department of Civil Engineering, University of Washington.

Holloway, I. (2008). A-Z of Qualitative Research in Nursing and Healthcare: Oxford.Wiley Blackwell

Hosseinian, S. S. & Torghabeh, Z. J. (2012). Major theories of construction accident causation models: a literature review. *International Journal of Advances in Engineering & Technology*, 4(2), 53-66

Idoro, G. I, (2011). Comparing Occupational Health and Safety (OHS) Management Efforts and Performance of Nigerian Construction Contractors. *Journal for Construction in Developing Countries*, 16(2), 151 - 173

Idoro, G. I. (2007). Contractors Characteristics and Health and Safety Performance in the Nigerian construction Industry. Proceedings of CIB World Building Conference on Construction for Development, Cape Town, South Africa. 7 (1), 5-10.

Idubor, E. E. & Oisamoje, M. D. (2013). An Exploration of Health and Safety Management Issues in Nigeria's Efforts to Industrialize. *European Scientific Journal*, 9(12), 154 – 169.

King, R. W., & Hudson, R. (1985). Construction hazard and health and safety handbook:health and safety, Butterworth, London.

Lee, S. & Halpin, D. W. (2003). Predictive tool for estimating accident risk. *Journal of Construction Engineering and Management*, 129(4), 431-436.

Lingard, H & Rowlinson, S (2005). Occupational Health and Safety in Construction Project Management, Spon Press.

Mahalingam, A. & Levitt, R. E. (2007). Safety Issues on Global Projects. *Journal of Construction Engineering and Management*, 133(7), 505 – 509.

National Bureau of Statistics (2018). Overview of GDP in Q4 2017. *Nigerian Gross Domestic Product Report*, National Bureau of Statistics, Abuja, Nigeria.

Odeyinka, H.A. (2000). An evaluation of the use of insurance in managing construction risks. *Construction Management and Economics*, 18, 519-524.

Ohdo, K., Hino, Y., Takanashi, S., Takahashi, H., & Toyosawa, Y. (2011). Study on Fall Protection from Scaffolds by Scaffold Sheeting During Construction. *Procedia Engineering*, 14, 2179 – 2186.

Okeola, O. G. (2009). Occupational Health and Safety (OHS) Assessment in Construction Industry. 1st Annual Civil Engineering Conference, University of Ilorin, Nigeria.

Patrick, W. (2008). MBAM Expresses Concern on Overall Safety at Construction Sites. Master Builder Association Malaysia (MBAM)

Stokes, M (1990). Construction Law in Contractors' Language, 2nd ed. New York: McGraw-Hill, Inc.

Taylor, R.J. (2012). Professional liability insurance for construction projects. Retrieved from https://www.irmi.com/articles/expert-commentary/professionalliability-insurance-for-construction-projects.

World Bank Group (2016). The World Bank in Nigeria. *The World Bank working for a World Free of Poverty*. Retrieved from https://www.worldbank.org