

Assessing the Compliance to EU Directive 92/57/EEC of June 1992 among EU Construction Companies in Nigeria

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European Union (EU) commission initiatives as regard to ensuring greater protection of the safety and health of construction workers at workplace is the Council Directive 92/57/EEC of June 1992. The directive was designed to ensure the health and safety of workers on construction site in the European Community wherever building or civil engineering works were carried out. It is also expected for EU construction companies to comply with the directive while working outside EU member's state. The aim of the study is to assess the compliance to EU directive 92/57/EEC OF JUNE 1992 among EU construction companies operating in Nigeria with a view to determine their level of compliance to the directives. The study is criteria based study in which six EU construction companies met the criteria. A sample size of 228 was obtained through the snowball sampling techniques. The compliance level assessment was determined by calculating the average compliance value and importance compliance index of each of the 15 items abstracted from the directive. It can be concluded that the compliance level among the EU construction companies operating in Abuja, Nigeria to the EU directive 92/57/EEC of June 1992 is average, i.e average level. Based on the conclusion of the finding the Nigeria government needs to establish a body/board that will oversee or ensure the compliances to safety and health rules and regulation at workplace as contained in the EU directive for the EU construction companies operating in Nigeria.

Keywords: Council directive, Construction workers, Compliance level, Safety and Health

Introduction

According to Barbarosie *et al.*, (2010), the overall cost of accidents at work to the EU economy for year 2000 is estimated to be around 55 Billion EUR. The estimate equal is 0.64% for GDP for EU-15 in 2000. Another Statistic has shown that the number of accidents at work in the EU decreased by more than 17% between 1995 and 2005, fatal accidents decreased even more markedly over the same period by over 35% the same statistics shown that every year 5720 people still died in the EU as a consequence of work-related accidents (Barbarosie *et al.*, 2010), European Union (EU) commission initiatives as regard to ensuring greater protection of the safety and health of construction workers at workplace is the Council Directive 92/57/EEC of June 1992. The Council Directive 92/57/EEC of June 1992 was designed to ensure the health

and safety of workers on construction site in the European Community wherever building or civil engineering works were carried out. In some EU countries the adoption of the Directive was necessitated by the need for organization change due to the structural changes caused by the cluster of sub-contracting arrangements characterizing their construction industries. It is also expected for EU construction companies to comply with the directive while working outside EU member's state. Lorent, (1999) and Haupt, (2001) observed that the commission recognized that more than 50% of occupational accidents on the construction sites were attributed to unsatisfactory architectural and/or organizational options, and poor planning of the works at the project preparation stage. This information is vital as contractors are always blame for construction site accident with little or no blames on the other

members of the construction management. Moreover, according to Schaefer and Munck, (1999) and Haupt, (2001) the commission recognized that large numbers of accidents resulted from inadequate coordination especially where various undertakings worked simultaneously or in succession at the same construction site.

The main distinguishing features of the Directives include;

- a. The performance-based nature of the provision Directive.
- b. Ensuring that safety and health issues are taken into account through all phases of the construction process, extending to the operation, utilization, and maintenance periods, and the final demise of the facility through demolition;
- c. The redistribution of responsibilities for construction workers safety away from the contractor, who was previously solely responsible, to include all participants in the construction process from the client through to the end-user;
- d. The introduction of the project supervisor who is responsible, while acting for the client, for all applicable general safety and health requirements during the stages of design and project preparation, including ensuring that the safety and health plans and files are accordingly adjusted;
- e. The appointment of one or more safety and health coordinators by the client or the project supervisor, for either or both the project preparations and project execution stages, their duties in terms of each stage being differentiated;
- f. The compilation of mandatory safety and health plans by the client or project supervisor before actual work commences on site;
- g. The giving of a prior notice, which must be updated periodically and displayed on the construction site, submitted to the authorities

responsible for safety and health at work on all construction sites where the work is scheduled to last longer than 30 working days, and on which more than 20 workers are employed at the same time, or on which the amount of the work to be carried out is scheduled to be more than 500 person days;

- h. The mandatory preparation of a file appropriate to the characteristics of the project containing relevant safety and health information to be taken into account during any subsequent works.

Across Europe, 18 to 24 years olds are at least 50% more likely to be injured in the workplace than more experienced workers. Specific illnesses are on the rise including musculoskeletal diseases- such as back pain, joint injuries and repetitive strain. A sustainable and durable reduction in the number of occupational diseases and accident is the prime objectives of the EU policies in the field of health and safety at work (Barbarosie *et al.*, 2010). The following health and safety standard in a construction site were taken from Council Directive 92/57/EEC of June 1992:

1. Health and Safety measures are implemented throughout the construction process.
2. Health and Safety issues are distributed among all the construction team
3. Client safety supervisor is available during construction stages.
4. Prior notice are updated periodically and displayed on site
5. During demolition work appropriate precaution method and procedure are followed
6. Conduction safety inspection
7. Availability of hazard recognition and control procedure
8. All scaffolds are properly designed, erected and maintained
9. A competent person planned and supervised all construction activities

10. Every workplace are adequately ventilated and properly maintain.
11. Adequate safety program are in place at various workstation
12. Availability of clear safety policy
13. All first aid supplies on site are approved by the consulting physician is easily accessible when required
14. Availability of effective health and safety plan
15. Training on safety issues provided to the workers.

Even though much has been achieved as regard the health and safety of European workers, effort is still needed to reduce the number of work-related accident that the commission considers will improve standards of health and safety of workers. In Nigeria according to Mba and Halda (2014), lack of reliable data or accidents record on construction site is due to the fact contractors do not report accidents to appropriate authorities. The aim of the study is to assess the compliance to EU directive 92/57/EEC OF JUNE 1992 among EU construction companies in Nigeria with a view to determine their level of compliance to the directives.

Research Methodology

The choice of research methodology to be adopted in research work depend largely on the what the researcher intent to achieve. This study assesses the level of compliance with EU Directive 92/57/EEC/ of June 1992 by the EU construction companies operation in Nigeria. A mixed research approach was adopted. In mixed research approach the researcher combines elements of qualitative and quantitative approaches for the purpose of breadth and depth of understanding and corroboration. Qualitative research studies things in it natural form, how people view certain phenomenon such as attitudes, system value, culture or lifestyle (Mohammed *et. al.*, 2017). While quantitative research aim at counting things in an attempt to explain what is observed. The research target populations are indigenous construction workers working with EU companies in Abuja, Nigeria. Also

certain criteria were stated for this study. The criteria are:

1. The EU companies must be building/civil engineering companies.
2. The EU companies must have been in Abuja, Nigeria for not less than 20 years.
3. The construction worker must be a Nigerian by nationality
4. The indigenous construction workers must have been with the EU companies for not less than 15 years.

Six (6) EU construction companies met the research criteria and were considered for this study. The respondent samples (Indigenous Construction Workers) were drawn from the six EU companies through Snowball sampling techniques. The techniques involves primary data source nominating another potential primary data sources to be used in the research. Snowball sampling techniques was used because it is difficult or even impossible to come in contact with target population (local construction workers) working with foreign companies operating in Nigeria. Snowball sampling consists of two steps:

1. Identify potential target in the population, often one or two target can be found initially.
2. Ask those target to recruit another target (and ask those target again to recruit another target) etc.

Those steps are repeated until the needed sample size is found. Cold calling was avoided during the entire process. The sample size obtained is 228 which are similar to the work of Wu *et al.* (2008) and Lu AND Yung, (2010). The questionnaires administered on the target population were abstracted from the Directive 92/57/EEC of June 1992 and is a closed end questionnaire.

The compliance level assessment consists of calculating the average compliance value and importance compliance index of each item. Fifteen (15) items were abstracted for the purpose of this study from the directive.

Method of Calculating the Average Compliance Value and Importance Compliance Index

The method used in calculating average compliance value and importance

compliance index was adopted from the work of Dominowski (1980). Table 1 shows the modified method of calculating the average compliance value and importance compliance index.

Table 1 Method of Calculating the Average Compliance Value and Importance Compliance Index

S/No	Directive	4	3	2	1	0
		Strongly agree	Agree	Not sure	Disagree	Strongly disagree
		No. of Participants Marked				
1	Conducting safety training	0	2	9	5	5

Source: Dominowski, (1980).

$$\text{Average Value} = \frac{(0 \times 4) + (2 \times 3) + (9 \times 2) + (5 \times 1) + (5 \times 0)}{(0 + 2 + 9 + 5 + 5)} = 1.381$$

$$\text{Importance Index} = \frac{1.318}{4} \times 100 = 34.52\%$$

Results and Discussion

The questionnaires administered on 228 indigenous construction workers were statistically computed in order to determine the numbers of response to each of the items contained in the directive. Table 2 shows the computed findings of the construction workers respondent.

The response of construction workers has a pattern, as certain items response shows disagreement that is items 1 – 9 and 15 while others shows agreement with the items. Those items that show agreements are common items which even the local contractors ensure the provision of those items at sites. Further analysis was carried out in order to calculate the average compliance value for the purpose of ranking these values according to the highest average value and important compliance index. The average compliance values of each item abstracted from the Directive 92/57/EEC of June 1992 were calculated as shown in Table 3. Items 4, 8, 10, 11, 13 and 14 have their importance compliance index above 50% as indicated in Table 3. The remaining items scores less than 50%.

Issues of safety been taking into account throughout the construction process means that safety is important and must be complied with, but from the finding of this research as shown in Table 3 the issues are not properly addressed ie. 40%. Taking safety through construction process simply means complying with legislation and regulation, as legislation and regulation on safety provides a platform for effective construction practice. Therefore, emphasis at the inception of the project must be on safety and OSH management system must be implemented at all level of construction phases as contain in the directive 92/57/EEC of June 1992.

Communication on health and safety issues to construction teams is vital in achieving accident free workplace. As observed from the finding in Table 3 the issues is not properly and adequately handle by the EU companies in Abuja, i.e 38.8%. Effective communication among construction team on safety issues secure proper on – site working condition and at the same time gain respect for the industry.

Table 2 Computation of of Construction Workers Response

S/no.	Directive	Strongly agree 4	Agree 3	Not sure 2	Disagree 1	Strongly disagree 0	Total
Evaluation							
1	HS measures are implemented throughout the construction process.	6	20	110	61	31	228
2	HS issues are distributed among all the construction team	4	18	101	64	41	228
3	Client safety supervisor is available during construction stages	2	7	96	59	64	228
4	Prior notice are updated periodically and displayed on site.	36	59	74	30	29	228
5	During demolition work appropriate precautions method and procedure are followed.	41	53	79	30	25	228
6	Conducting safety inspection	22	38	71	61	36	228
7	Availability of hazard recognition and control procedure	27	43	61	61	36	228
8	All scaffolds are properly designed, erected, and maintained.	57	78	21	53	19	228
9	A competent person planned and supervised all construction activities.	17	33	114	44	20	228
10	Every workplace are adequately ventilated and properly maintain	65	78	5	47	33	228
11	Adequate safety program are in place at various workstation.	46	82	30	47	23	228
12	Availability of a clear safety policy.	21	39	111	27	30	228
13	All first aid supplies on site that are approved by the consulting physician are also easily accessible when required.	49	115	5	39	20	228
14	Availability of effective health and safety plan.	42	56	75	30	25	228
15	Training on safety issues provided to the workers.	21	36	82	56	33	228

Source: Field survey, October 2017

Table 3. Analysis of Average Compliance Value and Average Importance Compliance Index

S/no.	Directive	Strongly agree 4	Agree 3	Not sure 2	Disagree 1	Strongly disagree 0	ACV	AICI
Evaluation								
1	HS measures are implemented throughout the construction process.	6	20	110	61	31	1.60	40%
2	HS issues are distributed among all the construction team	4	18	101	64	41	1.47	36.8 %
3	Client safety supervisor is available during construction stages	2	7	96	59	64	1.21	30.3 %
4	Prior notice are updated periodically and displayed on site.	36	59	74	30	29	2.19	54.8 %
5	During demolition work appropriate precautions method and procedure are followed.	41	53	79	30	25	2.14	56%
6	Conducting safety inspection	22	38	71	61	36	1.78	44.5 %
7	Availability of hazard recognition and control procedure	27	43	61	61	36	1.84	46%
8	All scaffolds are properly designed, erected, and maintained.	57	78	21	53	19	2.44	61%
9	A competent person planned and supervised all construction activities.	17	33	114	44	20	1.93	40.3 %
10	Every workplace are adequately ventilated and properly maintain	65	78	5	47	33	2.42	60.5 %
11	Adequate safety program are in place at various workstation.	46	82	30	47	23	2.36	59%
12	Availability of a clear safety policy.	21	39	111	27	30	1.97	49.3 %
13	All first aid supplies on site are approved by the consulting physician is easily accessible when required.	49	115	5	39	20	2.59	64.8 %
14	Availability of health and safety plan	42	56	75	30	25	2.26	56.5 %
15	Training on safety issues provided to the workers.	21	36	82	56	33	1.61	40.3 %

Note:

AVC = Average Compliance Value

AICI = Average Importance Compliance Index

Most EU construction companies do not allow client safety supervisor's on sites, only 30.3% of the EU companies comply with the directives. This action is not good as there is possibility of flouting safety rules by some EU companies. Flouting safety rules may course accident on site which may

results in death or injuries to construction workers. Updating periodically issues concerning safety on sites can benefit the company from an improved change that cultivates a vision for future which elevates safety concerns. The finding as contained in Table 3 shows above average compliance to

the directive i.e 54.8%. Updating periodically and displaced on site safety matters can lead to safer system construction work and reduce the incidence of injuries and work related diseases. The poor performance records of safety and health in construction industries is because OSH management systems have been neglected as a function that has not been pursued systematically in the construction industry. The industry can benefit a lot by complying with method and procedure in carrying out work activities (demolition). Effective method and procedure practice is aimed at eliminating or reducing occupational risk. The finding of this research in Table 3 shows the compliance level of the EU companies' i.e 56%. Safety inspection is associated with identifying factors that can cause accident at workplace and at the same time analysis those factors so as to come up with effective preventive measures. The finding of this research work as shown in Table 3 only 44.5% compliance level among the EU companies.

A hazard is a condition or situation that has the potential risk to causes injuries or illness. Eliminating or reducing those potential risks at the workplace is term as hazard control. The result in Table 3 show below average in compliance to the directive on hazard recognition and control procedure among EU construction companies. Flouting safety rules in construction sites most especially in the construction of high – rise building is commonly associated with the use of unskilled construction workers to erect scaffolding, such a dangerous act can lead to collapse of the scaffolding which may result in body injuries or even death of the worker. As regard to the issue of scaffolding erection most EU companies complied with the directive i.e 61%. The directive does not ensure the safety of workers most especially as regard to designing, erecting, maintaining and dismantling of the scaffolding. But having a safety – conscious contractors supported by experienced and trained employees will ensure the safety of the workers. People working for a supervisor that never mentions safety will make people

perceive that safety is not an important issue and they will not place more emphasis on safety at the workplace. This can lead to different types of accident on sites. Working under a competent safety supervisor will ensure the workers to view safety as an important aspect and act safely. From the result in Table 3 most working activities carried out on sites by the EU construction companies are not being supervise by competent person i.e 40.3%. Workings under competent persons provide a safer working environment as safety is their main priority at workplace. Ventilation is aim at checking if adequate natural/mechanical ventilation is provided at the required workplace as contain in the directive. From Table 3 most EU companies operating in Abuja comply with the directive as regard to adequate ventilation at workplace i.e 60.5%. Adequate ventilation at workplace is necessary in order to avoid a similar case of Leong Chin Kum V Selco (shipyard) Pte Ltd [1983] 1 MLJ 22, according to Heng (2005) the deceased, knew that he needed clearance of the safety promoter and a powered blower to ventilate the tank yet he willfully entered the tank alone with no one present in the compartment ignoring all the safety procedures. Safety program is an important area in planning for accident free construction sites.

The level of compliance to the provision of adequate safety program at workstation as indicated in Table 3 is above average i.e 59%. Adequate and well-articulated safety program can cut down the rate of accident, which could help in promoting the image of the EU companies most especially as regard to safety and health. Safety program begins with a safety policy statement, stating the commitment of the management of an organization to the issues of safety, health and welfare of their employees. The level of compliance in Table 3 among EU companies is little below average i.e 49.3%. Safety program to be effective and relevant within an organization, there must be full commitment from the company top management and commitment must include a clear safety policy statement that safety is their concern. The EU directive required

that the first-aid kit shall consist of materials approved by the consulting physician in a weatherproof container with individual sealed packages for each type of item and shall be easily accessible when required. The compliance level among the EU companies is encouraging that is 64.3% as shown in Table 3. First aid facilities play a significant role by helping to prevent a minor injury from becoming a major injury. The construction health and safety plan should set out the arrangements for securing health and safety for workers on site and the general public that may be affected by the construction activities on the site.

The level of compliance to the directive among the EU construction companies is encouraging as indicated in Table 3, i.e 56.5%. This plan is expected during the construction processes to undergo review and amendment. It is expected that all employees must have sufficient training, technical knowledge or experience in ensuring the reduction of risk of injuries at workplace. An unsatisfactory level of compliance is associated with EU companies as their level of compliance is below average (40.3%) as indicated in Table 3. Training provides instruction as to how an act should be performed. It enables workers to recognize analysis and establish accident prevention and control measures. Thus training is crucial to the prevention of accident on construction sites.

Conclusion and Recommendation

The paper is aimed at assessing the level of compliances to EU directive 92/57/EEC of June 1992 among EU construction companies operating in Abuja, Nigeria. Fifteen items (15) on safety and health on construction sites were abstracted from the directive, those items were assess and analyses in order to determine their compliance level. From the result it can be concluded that the compliance level among the EU construction companies operating in Abuja, Nigeria to the EU directive 92/57/EEC of June 1992 is average, i.e average level to the directive compliance. Based on the conclusion of the finding, the EU construction companies need to improve

on their safety and health records as stipulated in the directives. The Nigeria government needs to establish a body/board that will oversee or ensure the compliances to safety and health rules and regulation at workplace among EU and other foreign construction companies operating in Nigeria. It is advisable for Nigeria government to make sure that a local competent safety and health officer is been employed by EU and foreign construction companies in order to ensure compliance to state and foreign safety laws. The EU member's state should establish a body/board that will monitor activates of EU construction companies operating within and outside EU members state in order to ensure to the EU directives at workplace.

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