

Institutional and Regulatory Frameworks for Health and Safety Administration: Study of the Construction Industry of Ghana

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Abstract:- The construction industry contributes to a significant proportion of industrial accidents and ill health. An enabling institutional and legal environment is necessary to enhance the health and safety performance of any occupational setting, particularly the construction industry. The study examines the institutional and legal environments relating to health and safety management in the construction industry of Ghana. Questionnaires were administered to a sample of contractors followed by semi-structured interviews involving factory inspectors, labour officers and consultants of the built environment. The results suggest five key factors contribute to ineffective health and safety management within the construction industry namely; lack of adequate resources for enforcing agencies, lack of empowerment of construction operatives to participate in health and safety management, several government departments responsible for occupational health and safety management, fragmented regulations relating to construction health and safety management and lack of education on relevant occupational health and safety regulations. The paper concludes by making recommendations based on the analysis of the institutional and legal environments within which Ghanaian construction companies manage health and safety.

Keywords:- Institutions, legal framework, construction health and safety; Ghana.

I. INTRODUCTION

Like most developing countries, Ghana depends on agricultural production and primary exports [1]. Economic trends indicate that Ghana has attained a macroeconomic stability and modest economic growth under the Ghana Poverty Reduction Strategy (GPRS) [2]. It is argued that Ghana is on course to attaining a middle income status by 2015 and its construction industry is likely to experience significant growth as a result of increased expenditure in infrastructure provision spurred by a recent discovery of significant oil deposits [3]. Fugar and Agyakwah-Baah [3] reported that the construction industry of Ghana contributes 8.5% to Gross Domestic Product and employs 2.3% of Ghana's labour force.

Alongside the attractiveness of the construction industry in nation building, its activities sadly pose serious health risks with developing countries leading in terms of the severity and frequency of such risks. It has been acknowledged that 25–40 percent of fatalities in the world's occupational settings are contributed by construction [4]. The accident statistics of Ghana's construction industry is unenviable and reported in Kheni [5] and Kheni [6].

Interestingly, regulatory systems and institutions in many developing countries including Ghana have been inherited from developed countries with very little revisions or updating of such regulations or restructuring of the institutions to reflect their current level of development and cultural milieus. The efficacy of occupational health and safety administration in these countries may therefore be questioned. In comparison with developed countries, the legal and institutional frameworks for occupational health and safety administration in developing countries are far less extensive and comprehensive [7]. Furthermore, very little research into innovative health and safety management techniques is lacking in the literature on health and safety management pertaining to developing countries. By extension of this argument, there is very little evidence of empirical studies undertaken on the relationship between legal and institutional variables and health and safety performance of the construction industry of developing countries. Clearly, the absence of enabling legal and institutional environments in developing countries partly translates into lack of enforcement of occupational health and safety regulations on construction sites and substandard occupational health and safety standards and labour practices within construction businesses.

Based on the limitations of the legal and institutional arrangements for occupational health and safety administration in Ghana, as a test case, a relevant research question is; what are the underlying reasons for the failure of legal and institutional arrangements to enhance health and safety performance of construction

companies in developing countries, specifically Ghana. Founded on the forgoing research question, the specific objectives of the study are as follows:

- to determine the level of compliance with occupational health and safety legislation by construction businesses;
- to identify underlying reasons for the low impact of the institutional and legal environments on health and safety performance of the construction industry of Ghana;
- to examine the institutional framework for occupational health and safety management; and,
- to make recommendations for improving occupational health and safety management.

II. LITERATURE REVIEW

2.1 Occupational health and safety management in developing countries

Construction processes in developing countries share similar characteristics in terms of the adoption of technology, construction methods, cultural environments and regulations [8-10]. These aspects of the industry in developing countries make the management of construction projects including health and safety difficult [11]. Murie [12] noted that factors such as informal, forced and child labour and an absence of decent laws effectively enforced means that health and safety has low or nonexistent priority in developing countries. Suazo and Jaselskis [13] and LaDou [7] report that occupational health and safety laws are incomprehensive and cover 10% of working population in developing countries, omitting many high risk sectors such as agriculture, fishing, forestry and construction. Koehn et al. [14] have cited bureaucracy, time pressures, ineffective institutional structures for implementing occupational health and safety laws and ignorance on the part of workers about their rights to a decent workplace, as factors militating against the implementation of effective health and safety management practices in developing countries.

The culture of the construction industry in developing countries does not promote health and safety. Certain practices of the industry are a disincentive to the effective management of health and safety. Ngowi and Mselle [15] observed that contractors in developing countries gain little competitive advantage from good health and safety management. The practices of competitive tendering and award of most public contracts to the lowest bidder in many developing countries compels contractors to drive their prices low, while cutting costs, which, in turn, affects health and safety. Also, many workers in developing countries are barely literate. Koehn et al. [16] have stressed that a key barrier to health and safety management is the difficulty in training illiterate workers. High poverty levels compel workers to accept work in unacceptable high risk situations without complaining or demanding their employers put in place health and safety measures. Mitullah and Wachira [17] have observed that workers, particularly in the informal construction sector in a developing country such as Kenya, are accorded little health and safety protection. These workers, according to the authors, do not belong to any form of union making it difficult for them to compel their employers to adhere to good labour standards. The abundance of cheap labour in developing countries means employers can dismiss site workers who perform unsatisfactorily and also replace them with new workers easily. This has been argued by Koehn and Reddy [18] to cause site workers to often take risks on the job, leading to serious accidents on site.

2.2 Occupational health and safety legislation in Ghana

Occupational health and safety legislation is a means by which the work environment can be controlled to ensure the safety, health and welfare of employees and persons likely to be adversely affected by the work environment are protected. In Ghana, occupational health and safety legislation has been inherited from a British legal and institutional framework at the time when Ghana was a British dependency. The health and safety of workers in the mining and wood processing industries of Ghana prior to independence, was protected by the Factories Ordinance 1952. This remained the main occupational health and safety legislation in force until its repeal by the Factories, Offices, and Shops Act 1970. Regulations made under the Factories Ordinance 1952 which remained enforced include:

- the Factories (Woodworking) Regulations, 1959;
- The Food Factories (Welfare) Regulations, 1959; and
- The Factories (Docks Safety) Regulations, 1960.

Ghana's occupational health and safety legislation is influenced by the International Labour Organisation (ILO). Principal ILO conventions relating to occupational health and safety which have been ratified by Ghana include:

- Underground Work (Women) Convention 1935 (No. 45);
- Radiation Protection Convention 1960 (No. 115);
- Guarding of Machinery Convention 1963 (No. 119);
- Hygiene (Commerce and Offices) Convention 1964;

- Working Environment (Air Pollution, Noise and Vibration) Convention, 1977; and,
- Labour Inspection Convention 1947.

Existing occupational health and safety legislation in Ghana is fragmented and limited in coverage. Some key economic sectors are not covered by the country's occupational health and safety laws. A notable example is the agricultural sector, although it employs over 60 per cent of the country's workforce there is no any form of occupational health and safety laws regulating the activities of the sector. This unfortunate situation can be traced back to colonial rule in Gold Coast (Ghana), where the colonial government placed more emphasis on labour relations in sectors of economy where formal employment relations existed. The mining and manufacturing sectors of the economy are examples of such economic sectors. Commenting on the shortcomings of occupational health and safety legislation of Ghana, Tetteh [19], noted that health and safety statutes evolve without due regard to existing ones, resulting in fragmentation, overlapping areas of jurisdiction and inconsistencies in occupational health and safety laws of the country.

2.3 Institutions responsible for implementation of occupational health and safety legislation in Ghana

Government institutions responsible for ensuring that occupational health and safety standards are maintained at workplaces fall under five ministries; the Ministry of Manpower Development and Employment (MMDE), Ministry of Environment and Science (MES), Ministry of Health (MOH), Ministry of Roads Transport (MRT) and Ministry of Lands, Forestry and Mines (MLFM). The ministries are responsible for policy formulation and, departments under them implement the policies. Other bodies, which actively influence occupational health, safety, and welfare, include employers' associations, trade unions, consultants, clients, financiers, and end users.

The Factory Inspectorate Department has sole responsibility for occupational health and safety. Other public departments and agencies with some health and safety responsibilities include the Labour Department, the Environmental Protection Agency, Occupational Health Services Unit, and the Attorney General's Department. Efforts at establishing other institutions, namely the National Commission on Occupational Safety and Health (NACOSH) and the Ghana Society of Occupational Health (GSOH) have not been successful [20]. Close collaboration, networking, and coordination in respect of the health and safety functions of these institutions have been poor, resulting in health and safety being accorded a low profile within occupations in the country. There are no consultations with employers' organisations, trade unions, and health and safety stakeholders on policy issues affecting occupational health and safety at national level. This may continue for some time unless the stake these bodies have in health and safety is stimulated. Public institutions responsible for health and safety have failed in their duties as enforcers and promoters of workplace health and safety [19]. The Occupational Health Service Unit of the Ministry of Health has the responsibility for providing curative care, first aid, worker education on health issues, health surveillance of workplaces and conducting risk assessments. Ghana's health ministry is proactively engaged in ensuring work environments are descent for workers. Unfortunately, the Occupational Health Unit faces constraints similar to the Factory Inspectorate Department. Clarke [21] estimates the proportion of Ghanaian workers receiving comprehensive occupational health services to be in the region of 1-2 percent, with the number of staff of the Occupational Health Unit in 2003 comprising four physicians and one qualified occupational health nurse.

The Labour Department is responsible for labour administration in Ghana. Accordingly, issues affecting labour, including workers' health and safety, fall within its jurisdiction. The department implements labour standards in conformity with the country's labour laws and International Labour Conventions ratified by Ghana. Two national labour laws are implemented by the Department; the Workmen's Compensation Law and the Labour Act. Hodges [22] has noted that forty-six ILO conventions have been ratified by Ghana. Where an employer persistently abuses rights of workers with regards to their health and safety, labour officers can, while seeking a solution to the problem, report the employer to the Factory Inspectorate Department. According to the 2004 Annual Labour Report [23], the department has 10 regional offices, 36 district labour offices and 62 employment centres countrywide.

The Environmental Protection Agency is under the Ministry of Environment, Science and Technology. The agency was established by the Environmental Protection Agency Decree, 1974, charged with the responsibility of implementing the environmental laws of the country. Environmental issues relating to the built environment are handled by a section of the agency.

2.4 Health and safety legislation relevant to the construction industry

There are no health and safety regulations developed specifically for the construction industry. Considering the high risk nature of the sector, this limitation seriously handicaps the implementation of health and safety standards on construction sites. The Factories, Offices, and Shops Act 1970 caters for factories,

offices, shops, ports, and construction. The Act provides for the minister for manpower, development and labour to make regulations in respect of construction works to address specific hazards including imposing duties on persons in respect of the hazards. Section 57 of the act relates to building and civil engineering works. Other sections relevant to building and civil engineering works specified in section 57 (1) of the Act include: sections 6 to 8, 10 to 12, 19, 20, 25 to 31, 33 to 40, 43 to 54, and 60 to 87. Under the Act, construction companies are required to register their sites (sections 6-8) and to report workplace accidents and dangerous occurrences to the Factory Inspectorate Department. It also requires them to provide wholesome drinking water on their sites (20), toilet facilities on the sites (19), and personal protective equipment for their workers (25), and to take preventive measures to control or prevent specific hazards on sites. The hazards named are; noise, vibrations, manual handling (26 and 27), and fire (31).

The Act also requires medical supervision of the health of employees where necessary. Businesses are required to take measures at the workplace in respect of access and egress to the factory (site), the construction and design of structures to ensure the safety of workers, and users of facilities (33-35). Fencing and safeguards are required to be provided or constructed and maintained for the safety of persons at the factory (site) (38-40). Records of lifting machines and appliances are required to be to be kept and they must be of sound construction, properly maintained and precautionary measures taken during their operation (37 and 43-47). Construction companies are required to take precautionary measures to prevent injury and explosions because of dust, gas, vapour, present in the work environment (48 and 49). Steam boilers, receivers and containers, and air receivers are required to be of sound construction, properly maintained and precautionary measures taken to ensure their operation (50). The Act provides for training of machine operators and persons employed in processes likely to cause injury (36). The Minister may make regulations to protect the health, safety, and welfare of workers (30 and 51). Other sections of the Act which relate to construction works include:

- Sections 52-54 set out the authority of inspectors in ensuring health, safety and welfare of persons at workplaces and the role the courts play in such matters;
- Sections 60-73 set out the offences under the Act and legal proceedings;
- Sections 74-77 relate to the administration of the Act; and
- Sections 78-87 relate to general matters.

Part XV of the Labour Act, 2003 (Act 651) concerns the health and safety and environment of workplaces. Under this Act, it is every employer's duty to ensure employees work under satisfactory, healthy and safe conditions. Other sections of the Labour Act which impact on health and safety include: protection of employment relationship; general conditions of employment; protection of remuneration; unions; employers' organisations and collective bargaining agreements; National Tripartite Committee; and, labour inspection.

The Workmen's Compensation Act 1987 imposes employer liability to pay compensation to employees incapacitated by accidents arising out of and in the course of their employment. Compensation payment to accident victims is independent of negligence on the part of employer or fellow-worker. The employer is also required to bear the hospital expenses of the injured worker. In cases where the injured worker only requires treatment, he/she is entitled to his/her earnings while undergoing treatment for injuries he/she sustained through an accident arising out of, and in the course of his/her employment. There are exceptions to employers' liability to pay compensation. These exceptions are: where the injury is due to the workman having been under the influence of intoxicating liquor or drugs at the time of the accident or where the injury was deliberately self-inflicted or where the workman knowingly misrepresented to the employer that he was not suffering or had not previously suffered from that or similar injury. The law applies to persons employed by both public and private organisations. The Act sets out modalities for calculation of the earnings of workers and payments of compensations to workers who sustain injuries.

III. METHODS

The choice of appropriate research methods involved consideration of the information required to achieve the stated research objectives. Two sets of data were necessary to accomplish the stated research objectives; quantitative data on incidence of compliance/noncompliance with health and safety legislation and subjective opinions of persons responsible for implementation of health and safety legislation to provide insights on how health and safety standards are implemented in the construction industry and why standards may not be attainable in some instances. Based on the aforementioned considerations, a multimethods approach was adopted. The benefits of employing such an approach include but not limited to the opportunity of combining methods with complementary strengths and possible improvements in the validity and reliability of the resulting data [24-28]. Survey questionnaires and semi-structured interviews were used for the quantitative and qualitative strands of the study respectively in two phases.

In the first phase, semi-structured interviews were conducted with the relevant institutions responsible for implementation of health and safety standards on construction sites in Ghana. The semi-structured interviews

enabled relevant data to be collected on interview participants' expert opinion on health and safety regulations and any challenges relating to implementation of health and safety standards in the construction industry.

The institutions involved included the Factories Inspectorate Department, the Labour Department, built environment consultants and Environmental Protection Agency. The interviews were restricted to the headquarters of these institutions because of the availability and access to personnel. The interview participants comprised key informants within the selected institutions and were chief executives, deputy chief executives, factory officers, labour officers and consultants of the rank of principal consultant or higher. The numbers of interview participants comprised; seven (7) factory inspectors, four (4) labour officers, six (6) built environment consultants and two (2) Environmental Protection Agency officers.

The second phase involved administration of questionnaires to construction companies in four administrative regions of Ghana. The regions range from moderately low economic activity to high economic activity and as such can be considered representative of the social and economic activity of the population of Ghana. Also, in terms of construction activity the selected regions mirror the overall construction activity in the country given that the regions range from the most recently created region to ones of average age and to the oldest. The questionnaires were administered to construction companies registered with the regional branches of the Association of Building and Civil Engineering Contractors of Ghana (ABCECG) and the Association of Road Contractors-Ghana (ASROC) in the four selected regions.

The development of the questionnaire involved a meeting which was held with three health and safety experts to discuss the questionnaire items. Each item of the questionnaire was read and the experts were requested to give their comments on the appropriateness or otherwise of the item. The comments and suggestions of the experts were incorporated in a second draft which was piloted in an actual field setting different from the one in which the questionnaire will be administered. The pilot test helped in improving the clarity and reliability of the questionnaire items. The final questions comprised both closed ended and open ended questions. Section A of the questionnaire requested information on company characteristics such as number of employees, turnover and age of the company. Section B solicited responses on compliance with health and safety legislations, implementation of health and safety standards on construction sites and challenges relating to health and safety management.

IV. RESULTS

The survey response rate was 32% which compares to studies carried in similar settings [6]. The profile of the companies in which the respondents were employed had number of employees that ranged from 5 – 271 employees with turnovers ranging from 450 USD to 10 million USD. The mean number of years of operation of the companies was 16 years. The sections that follow present the results of the semi-structured interviews and survey.

4.1 Institutions responsible for occupational health and safety

The government departments responsible for implementation of health and safety standards suffer from lack of adequate resources which situation is further exacerbated by high labour turnover. The comments of interview participants explain this point as follows:

“Like many government departments, the labour department suffers from high labour turnover and perennial budget cuts. Approved estimates of items relating to official journeys, utilities, office consumables, office accommodation, and other expenditure are not released in full, making the expected outputs of the department difficult to achieve” (Informant A – Labour Department). “Our performance with regards to workplace inspections has always been below the planned number of inspections, in the region of 5-10 per cent of targeted inspections. It is a difficult task you know, considering the huge resource constraints facing the department” (Informant B – Labour Department).

The answers to questions by informants from the Factories Inspectorate Department indicated the two departments had common challenges regarding resources needed for proper functioning of the institutions. The responses included the following:

“We have some equipment; we have sound level meters, equipment for measuring radiation level, air samplers and heat stress measuring equipment. Our major problem is how to maintain them. Most of the equipment is not available in the local market and getting their worn out parts is quite problematic. Even if you get the batteries, you still need to calibrate them and that is where the problem lies” (Informant C – Factory Inspectorate Department). “Our scheme of service is not attractive so we recruit staff, they get trained for the basic rudiments of factory inspection and then after one year they find some lucrative places to go and work; so our labour turnover is high, up to fifty percent” (Informant D – Factory Inspectorate Department).

Similar results were obtained from interviews with the Environmental Protection Agency. The results of interviews with consultants suggest a low level of commitment to health and safety issues and inadequacy of

contract provisions on health and safety matters relating to construction contracts. As can be seen from the statements below:

“The moral commitment to ensure safe and healthy sites is very low amongst consultants in this country. We do not set good example and that is the problem. If for instance I go to a construction site today and I put on the necessary helmet, boots and the necessary personal protective equipment then I will be doing a lot of service to improving construction site health and safety. Professionals are not committed to improving health and safety of construction sites; we talk of ensuring safer construction sites but we are not serious” (Informant H-Consultant).

The lack of adequate resources for proper functioning of these institutions coupled with low commitment to health and safety translates into poor compliance with health and safety legislation. This finding is corroborated by the survey results as can be seen from the considerably low responses on compliance with relevant health and safety legislation by survey respondents summarised in Table 1. The responses on compliance with health and safety standards contained in the Factories, Shops and Offices Act indicated very few of the businesses were aware of their responsibilities under the Act. Over half of the respondents (61%) stated that they did not know if their procedures met the Act and 3% (14) said their procedures did not meet it at all. However, a quarter (25%) of the respondents said their procedures partly met it and 10% said their procedures met it completely. On compliance with specific provisions of the Factories, Offices and Shops Act approximately three quarters of the respondents (71%) said they did not register any of their sites as required under the Act. Thirteen per cent (56) registered most of their sites and 12% (50) said they registered all their project sites. Four per cent (15) registered some of their sites and indicated that some of their sites were small projects and as such, they did not register them. Other reasons given for not registering some sites included the location of sites and time pressures.

The respondents’ opinion of the Workmen’s Compensation Law with regard to their procedures did not differ either, with only 15% stating that their procedures met the Act. Thirty-one per cent (130) of the respondents said their procedures partly met the Workmen’s Compensation Act and forty-seven per cent (200) said their procedures did not meet the Workmen’s Compensation Law. Six per cent (27) said they did not know if their procedures met the health, safety, and welfare procedures contained in it. Some of respondents also stated that their procedures met the Sanitary Regulations of the Municipal Assemblies (11%) and the Environmental Assessment Regulations (16%). These results are likely to be exaggerated by most of the survey respondents as there is a tendency to project a good image of one’s company.

Table 1 How well the of businesses’ health and safety procedures met relevant health and safety regulations

	Conditions of contract		Labour Act		Factories, Offices and Shops Act		Workmen's Compensation Act	
	Count	%	Count	%	Count	%	Count	%
Completely	417	98.8%	187	44.3%	44	10.4%	65	15.3%
In part	1	.2%	208	49.3%	105	25.0%	130	30.9%
Not at all	0	0	16	3.7%	14	3.2%	200	47.3%
Do not know	4	1.0%	11	2.7%	259	61.4%	27	6.4%
Total	422	100.0%	422	100.0%	422	100.0%	422	100.0%

4.2 Implementation of health and safety standards at workplaces

Faced with lack of adequate resources, most enforcement agencies sparingly and/or partly carry out enforcement activities mandated by Acts establishing them. For instance, the Factory Inspectorate Department carry out general factory inspections, construction site inspections, and accident and incident investigations although activities mandated by the Factories, Shops and Offices Act are nevertheless limited to these. These activities were undertaken in relatively more hazardous occupations such as factories, construction sites and plants because of the constraints mentioned earlier. Even so, only construction sites registered with the department were sometimes visited. One interview participant commented on the disparity in enforcement activities of his department as follows:

“With the constraints we face, we mostly discriminate by identifying the problem areas and concentrating our work there. We especially look at the accident rates and the hazardous nature of the job to decide on which ones we must ensure comply with the law. We have few personnel, so I will not send my people to offices where, even though some of the hazards are latent and could result in chronic illnesses. We concentrated our inspection activities in workplaces where the risk of accidents is very high and where the workers are in eminent danger” (Informant E – Factory Inspectorate Department).

Activities such as electrical inspections and testing of pressure plants had never been carried out because of lack of adequate manpower with the result that no sections existed to cater for those aspects. These results are also corroborated by survey results. Respondents indicated that 75% visits by factory inspectors and labour officers was in connection with accidents that had occurred on their sites with only 15% for inspections and 10% to register the construction sites. Clearly activities of enforcing agencies are by no means limited to the aforementioned three areas.

Key limitations to the activities of enforcing agencies also relate to the temporal nature of construction sites, wrong attitude of placing profits above other company goals by construction businesses, lack of knowledge of responsibilities under health and safety legislation. These issues are evident from the interview responses. For instance two interview participants stated as follows:

“Unfortunately, construction, as we know, is one of the hazardous areas you can get workers in, but before you even get to a construction site, they have already started the work either out of ignorance of the law or their refusal to comply with the law. It is not like a factory where you know the location, and it is there for several years. If they close down they will come and tell you whereas most contractors will not register their sites and by the time the Factory Inspectorate is aware, it is near completion. Often, we don't get to construction sites to inspect the site layout and other safety and health aspects before they start construction” (Informant F – Factory Inspectorate Department). “Many contractors want to make the maximum profits and would not provide the necessary personal protective equipment for their workers. They do not evaluate the risk involved in carrying out construction work and as such do not take steps to minimise or eliminate hazards. Some of their workers are employed without completing their apprenticeship training; while some may not be trained. They may not be sensitised for their safety. Most of their workers are from the informal sector where they may not go under any regulation or union. They wouldn't want to spend their time, money and resources to train their workers to a certain standard of safety and health” (Informant G– Labour Department).

The Factories, Offices, and Shops Act 1970 is the main regulation on occupational health and safety in Ghana. The Act requires construction companies to notify over three day accidents, fatal accidents and dangerous occurrences to the Factory Inspectorate (Section 4, 10 (1) and 11 (1)). They are also required to notify the Factory Inspectorate within seven days of taking possession of their sites (Subsections 5 and 6). However, as the responses indicated very few of the businesses were aware of their responsibilities under the Act. Over half of the respondents (61%) stated that they did not know if their procedures met the Act and 3% (14) said their procedures did not meet it at all. However, a quarter (25%) of the respondents said their procedures partly met it and 10% said their procedures met it completely. Approximately three quarters of the respondents (71%) said they did not register any of their sites as required under the Factories, Offices, and Shops Act (refer to Table 2). Thirteen per cent (56) registered most of their sites and 12% (50) said they registered all their project sites. Four per cent (15) registered some of their sites and indicated that some of their sites were small projects and as such, they did not register them. Other reasons given for not registering some sites included the location of sites and time pressures.

Table 2. Registration of project sites with Factory Inspectorate Department

Project sites	Frequency	Percent	Valid Percent	Cumulative Percent
All project sites are registered	50	11.9	11.9	11.9
Most of our project sites are registered	56	13.4	13.4	25.2
Some project sites are registered	15	3.5	3.5	28.7
Non of the sites are registered	301	71.3	71.3	100.0
Total	422	100.0	100.0	

When asked to which establishments they report accidents on their sites, over half (60%) said they reported their accidents to the Labour Department, 47% (198) said they reported to Police Motor Traffic and Transport Unit (MTTU), and only 7% (30) reported to the Factory Inspectorate Department. Accidents are reported to the Labour Department for the purposes of making accident related claims and disputes relating to working conditions. Many workers are ignorant of their rights under the law and rarely insist upon their rights beyond payment of salaries and wages they think are due them. This, in itself, is a contributory factor to the low rates of reporting of accidents. Secondly, the close relationships that exist between most owner managers of small construction companies and their employers accounts for the settlement of such accident claims by mutual agreement between construction companies and their employees. Four (1%) of the respondents said they reported to non of the mentioned departments and 3% stated the National Health Service as an additional department they reported accidents to (refer to Table 3).

Table 3 Establishments to which respondents reported accidents

	Factories Inspectorate Department		Labour Department		Motor and Traffic Transport Unit		None of the mentioned departments		Report to another department not mentioned	
	Count	%	Count	%	Count	%	Count	%	Count	%
No	392	93%	169	40%	224	53%	418	99%	409	97%
Yes	30	7%	253	60%	198	47%	4	1%	13	3%
Total	422	100%	422	100%	422	100%	422	100%	422	100%

V. DISCUSSION

The literature points to ineffective institutional structures for implementing health and safety standards, low level of involvement of consultants and employers in health and safety issues in developing countries as the main contributory factors to poor health and safety performance of the construction sector. This is also true of Ghana as discussed in the literature section. The survey and interview data corroborate evidence of poor compliance with health and safety laws by SMEs and ignorance of construction companies of their responsibilities under health and safety law. Also, there is evidence which is consistent with the literature findings that the institutional structure for implementing health and safety laws exerts little influence over health and safety issues affecting construction companies [14].

The administration of health and safety requires an efficient and adequately resourced institutional structure for implementing health and safety standards at workplaces nationally. However, this is not the case in Ghana where there are many departments and agencies having responsibilities for occupational health and safety administration with overlapping roles. It is also a fact that different health and safety laws and regulations are administered by the different departments or agencies responsible for occupational health and safety. The many departments and agencies responsible for health and safety result in bureaucracy and an increase in corruption common in the construction industry. The institutional structure therefore does not facilitate ease of compliance with health and safety laws because of many procedures required under the slightly different health and safety regulations which different departments and agencies seek to implement. Indeed, many construction companies are simply ignorant or confused as to which organisations to report accidents to and, about their responsibilities relating to health, safety and welfare laws. As the results of both the survey and the interviews demonstrate, very few construction companies report accidents to the Factory Inspectorate Department and some are unaware of the existence of the department and their responsibilities under the main health and safety law. This finding supports Tetteh's [19] assertion that areas of jurisdiction are the bone of contention between departments responsible for occupational health and safety and dissatisfaction amongst employers as a result of these issues in Ghana.

Coordinating the activities of the ministries, departments and agencies responsible for occupational health and safety is far from achievable as there is no law mandating any of the institutions with the responsibility to coordinate the activities of the rest. The non existence of a national policy on occupational health and safety adds to the problem of occupational health and safety management in the country. All the institutions lack adequate resources to effectively carry out their functions with the most severely constrained being the Factory Inspectorate Department with neither funding mechanisms nor logistical support.

Ghana's lack of capacity to manage occupational health and safety is evident from the lack of commitment to manage health and safety effectively. The absence of pressure brought to bear on contractors on construction sites means some scrupulous contractors can take advantage of lack of punitive deterrent measures to place economic again above other business objectives, including health and safety. It is therefore common to find some construction companies that would manage their businesses without bordering the least about health and safety issues. This unfortunate situation leads to lower motivation on the part of construction companies to manage the health and safety aspects of the construction sites compared with when there is strict implementation of inspections and fines that are high enough to deter potential abusers of health and safety law. Research provides evidence to support this; that fines and other punitive measures for breaking health and safety law compels employers to proactively manage health and safety because of fear of being penalised or exposed [29].

There are a number of concerns regarding the implementation of the Factories, Offices and Shops Act. First, regulations are needed to set standards for specific situations of the act. In the absence of these standards, employers wishing to comply with the requirements of the law will adopt standards which are very subjective. There is no law defining funding mechanisms for implementing occupational health and safety. Also, establishing compliance and enforcement networks is not covered by the Factories, Offices, and Shops Act which is the main occupational health and safety law of Ghana.

In Ghana, while the minister for manpower development may in respect of construction works make regulations to address specific hazards and impose duties on project participants, no such regulations have been promulgated. The results indicate the measures actually implemented on most sites fall short of the minimum health and safety standards spelt out in occupational health and safety legislations and provisions contained in contract documents. Considering that health and safety regulations are intended to make project sites satisfactorily safe and free from health risks, it is doubtful whether any significant achievements have been made in this regard. Notably, many are unaware of their responsibilities under health and safety law and tend to comply with only contract conditions on health and safety. For instance, over half of the construction companies were not sure if their procedures met the health and safety provisions of Ghana's main health and safety legislation; the Factories, Offices and Shops Act. Accident reporting to the Factory Inspectorate Department is also poor and many of the construction companies in the study rarely registered their sites as required under the Factories, Offices and Shops Act. Not surprisingly, the number of respondents who indicated that they complied with the Labour Act was more than the number that complied with the Factories, Offices, and Shops Act.

The results suggest that Factory Inspectors do not regularly visit construction sites to enforce compliance with health and safety legislation. Many other departments responsible for implementing health and safety standards are not adequately resourced to carry out their functions effectively. The number of businesses reporting their accidents to the Factory Inspectorate Department was the smallest compared to other departments to which accidents were reported. This raises a serious concern, given that the Factories, Offices, and Shops Act is the main source of guidance on construction health and safety in Ghana. In Ghana, accident forms have to be filled and accidents reported to the Labour Department and Factory Inspectorate in compliance with the Factories, Offices and Shops Act and Workmen's Compensation Law. However, most accidents go unreported to the latter department even though it is a statutory obligation to do so. Reporting to the Labour Department seemed to be favoured because workers injured at their place of work are entitled to compensation payment administered by it; provided the injury is not a result of wilful misconduct on the part of the worker. Injured workers are entitled to free medical care and their full earnings whilst undergoing treatment. However, reporting accidents to the Labour Department is not without problems. Construction companies are likely to fear the image of their businesses will be dented and disclosure of poor performance to government departments can compromise the autonomy they wield and their personal integrity.

The analysis of the institutional and legal environment in relation to occupational health and safety management in Ghana presented underscore the need for an enabling institutional and legislative framework for improving health and safety performance of the construction sector. The following recommendations are made towards realising an enabling and sustainable institutional and legal **framework**:

- overcoming the overdependence of enforcing agencies on government subvention through enacting laws defining appropriate funding mechanisms for government institutions directly responsible for implementing health and safety standards on construction sites;
- construction specific health and safety regulations are needed for the construction sector;
- easing compliance with health and safety regulations through the reduction of the number of enforcing agencies/departments to a single department with overall responsibility for occupational health and safety of all economic sectors; and,
- creating a sustainable construction health and safety research and information resource base by forming a health and safety information centre through collaboration with institutions under the Council for Scientific and Industrial Research (CSIR) which are responsible for research and dissemination of research information in construction.

VI. CONCLUSION

The findings suggests inefficiencies in the institutional structure responsible for implementing health and safety standards at workplaces have adversely affected the attitudes of construction companies towards health and safety in Ghana. There is poor coordination of the activities of the many institutions responsible for implementing health and safety standards. Also, there is no specific health and safety regulation for the construction industry of Ghana. The level of compliance with relevant health and safety legislation is undesirable and remarkable improvements in this regard are necessary. Re-structuring of Ghana's occupational health and safety administration system is necessary for a positive change in the attitudes of construction companies and site operatives towards occupational health and safety to take place. Recommendations that could serve as policy guidelines for improving health and safety management in Ghana are presented based on the discussion of the results of the study.

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