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AN EVALUATION OF THE EFFECTS OF LABOUR MANAGEMENT RELATIONSHIPS ON CONSTRUCTION SITE PRODUCTIVITY IN GHANA

BY

DERRICK AGGREY- ANYOMI

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DERRICK AGGREY-ANYOMI

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DECLARATION

Student's Declaration

I, Derrick Aggrey-Anyomi declare that this dissertation, with the exception of quotation and references contained in published works which have all been identified and acknowledged, is entirely my own original work, and it has not been submitted, entirely in part or whole, for another degree elsewhere.

Signature .. ……..

Date …….……

Supervisor's Declaration

I do hereby declare that the preparation and presentation of this dissertation was supervised in accordance with the guidelines on supervision of dissertation laid down by the University of Education, Winneba.

Name of Supervisor: Engr. Michael Korblah Tsorgali

Signature ……

Date ……

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DEDICATION

This work is dedicated to the Almighty God for his unquenchable love and preservation of life.

Also to my family and children who have been an inspiration to me since the came in to my life.

Final to all who have supported me in prayers and kind, naming all of you will be endless so my dedications

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ABSTRACT

An evaluation of the impact of labour-management relationships on construction site productivity in Ghana was essential to be looked into from the concept of productivity. The theory of construction productivity commenced in the early twentieth (20^{th}) century with a series of time and motion studies to improve bricklaying activities. Productivity is directly linked to labour-management relationships, and in turn dependent on productivity. Bad labour-management relationships of construction employees have contributed significantly to the declining productivity that cannot be quantified in the construction industry. The aim of the study is to explore labour relations and its effects on construction site productivity. The study adopted a cross sectional survey design. A survey was carried out on 22 construction companies obtained from a Snowball sampling. This was as a result of the difficulties encountered in accessing the population sample. The findings of the study revealed that, among the highest considered factors, "Opportunity to undertake challenging tasks, bargaining power, Recognition with company achievements, belongingness and affection, existence of labour union amongst others) had great impact on productivity. Major recommendations provided include that double targets should always be set on projects of which the higher target made known to workers and monitor progress with the threshold target. In addition, it is recommended that employees should be allowed to take breaks by supervisors whenever efforts are made to attain the set goals. Further, management and immediate supervisors should ensure that good teamwork is established through collaborations, both on and off site by assigning task to groups of workforces with qualified and competent supervisors.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Every employee in an organization or a firm needs good management notwithstanding the category of work they are assigned daily or assigned duties in their period of employment. To carry out this managerial activity in the construction firms successfully, there should be a well-defined Human Relation amongst the employer and the employees (skilled and unskilled personnel), boss and his subordinates. Over the years, lot of challenges and opinions have been expressed as to how better human relations can improve productivity level on the construction sites. Employee management stimulates more and better work force when the firm has effective human relations.

Measuring human relations effectiveness is an interesting new to focus for human resource as it highlights the profession's need to measure results, not only in terms of transacting management but also in terms of driving the business or the firm. Professionals have been questioned in the past regarding their business acumen. Utilizing metrics to determine effectiveness is the beginning of a shift from perceiving human resource's role as purely administrative function viewing the human resource team as true strategic partner within the organization. Other important issues to be looked into are labour disputes which include organizational effectiveness, compensation, recruitment and availability of local labour, succession planning and availability of local labour and learning and development. (Pricewaterhouse 2005).

When efficiency and morality deteriorate, then one can say human relation is ineffective and this produces low productivity to the firm and indirectly puts the firm in future dange of losing potential contracts. Its interest to know that despite the great advances made in utilization of Mechanical and Electronic Plants, the construction industry seems certain to remain a high labour content industry so that the personnel function (human relations) is of necessity, a very important factor in construction industry. Since the organization's most important resource is the people who supply the work and produces high output, the subject is therefore intended to study the kind of Human Relation expected in the management of construction operations on construction site in Ghana.

1.2 Problem Statement

The enormity of good human relations cannot be under estimated since it boosts the morale of the employees in an organization or a firm. As stated in the latter part of the introduction, the organization's most important resources are the personnel thus the workforce who supplies the input to produce a high productivity. This stamps the authority and position of good human relations in the organization or a firm which would really champion the course of executing required duties.

The business strategy and its approach to human resource management is to recognize that the most valuable asset an organization or a firm could have are the personnel. The success of every organization or a firm is totally dependent on the personnel and the relationships they have with the organization or the firm and the clients.

It could be noticed that most firms fail to provide high productivity to meet the scheduled time projected, due to lack of commitment, which result from poor human relation in the

organizations. In many cases employees are often treated as a tool by their employers or leaders. Artisans/Labourers are normally looked down upon by their employers or superior officers in the construction firms, with regards to the above, employees are not committed whole heartedly to increase production and this result in grumbling and dispute. It may interest you to know that, when the leader is also the supervisor, he/she does not identify him/herself with the working team.

Artisans/labourers pretend to be very seriously engaged and busy on sighting the presence of the supervisor at the working. These are signs of apathy shown by the direct workforce that goes on in the Construction Industry as a result of poor human relations. The above-mentioned challenges necessitated for the study into human relations in the Management of Construction operations on the construction sites in Ghana.

1.3 Aim and Objectives of the Study

The aim of the study is to explore labour relations and its effects on construction site productivity. The specific objectives are as follows:

(a) to determine the sort of labour-management relationships that affects the output of employees on the construction site in Ghana;

(b) to determine the factors that affect labour-management relationships in the management of construction productivity on the site;

(c) to assess the effects of labour-management relations on construction site productivity in Ghana; and,

(d) to make recommendation for improving productivity through effective labour management relations in Ghana.

1.4 Research Questions

Based on the aim and objectives of the study the following research questions will guide the conduct of the study:

a. What typologies of labour-management relations exist on construction sites in Ghana?
b. What are the factors that affect labour-management relationship in the management of construction productivity on the project sites?
c. What are the effects of labour-management relations on construction site productivity in Ghana?

1.5 Significance of the Study

The study will be of importance to several stakeholders: Firstly, it will have implications for policy makers through the findings of the study. Secondly, its results will enable construction stakeholders to have foundational knowledge on the management of labour relations in construction organization so as to optimize productivity on construction project sites in Northern Regions as well as similar setting in Ghana. Thirdly, the findings will serve as grounds for researchers who have interest in industrial/labour relations in the construction sector of Ghana and beyond. Additionally, the study provides suggestions and directions on future research relating to labour relations and productivity in Ghana.

The findings could be used as a reference document to guide other researchers in understanding the influence of labour relations on construction site productivity. Also, other information beneficial to build environment researchers include, factors affecting labour-

management relationships and current labour relations practice in Ghana and similar developing countries in Sub-Saharan Africa.

1.6 Limitations and Delimitations of the Study

A number of key challenges to the conduct of the study are worth highlighted. Firstly, time constraints; as it is expected to end within two semesters of the academic year. Secondly, financial constraints militated against the research and have implications for the scope of the study. Consequently, the researcher had to limit the study to one region in Ghana. Another challenge is the language used in data collection tool which the respondents may not understand and answer appropriately. In some instances, the content of the questionnaires will have to be translated into the local language which could alter the intended meaning of the questions and the answers given by the respondents.

This study will not cover the entire country which is necessary for a wider applicability of the findings of the study in the construction industry. Instead, it will be limited to one region. Therefore, any generalisations of the study's findings must be done with caution.

1.7 Organization of the Study

The structure of this thesis is made up of six chapters: that is the introductory chapter; literature review; the research methodology; results of the research; discussion, conclusions and recommendations for future actions in the GCI. The first chapter consists of the background to the study, the statement of the problem, the purpose of the study, objectives, and research questions, significance of the study and lastly limitations and delimitations of the study.

The chapter two deals with literature review, beginning with introduction, followed by an overview of the construction industry, theory of labour-management relationships, theory of productivity and the relationship between labour relations and productivity in the construction industry. The third chapter deals with the methodology of the study which begins with introduction, defining the population of the study, the sampling methods, respondents' organization, questionnaire development and data analysis.

Chapter four presents, the analysis and results of the study. It contains the summaries of the results in the form of tables and figures to facilitations interpretations and their explanations. Chapter five presents the discussion aspect of the research where major findings are discussed. Chapter six presents a summary of the findings of the research, conclusion and recommendations as well suggestions and directions for further studies.

CHAPTER TWO

LITERATURE REVIEW

2.1 Labour-Management Relations and Productivity in the Construction Industry

This section provides a review on the relevant literature for this study. It discusses labour-management relationship and productivity. In the process, resources management that is Human resource, labour, capital and equipment as resources. This followed by a review of the various theories' motivation. The chapter ends with a discussion of productivity and how it is measured.

2.2 The Construction Industry and its Impact on Economies

The construction industry is a vital and essential sector and plays an important role in a national economy due to its unavoidable patronises of its end products such as buildings, roads and dam, it is also used as an economic regulator by government who is a major client of the industry by intervening to regulate performance through financing, legislation and provision such as:

- Intervention in the market through finance by grant, benefits, subsidies, taxation and sovereign guarantees.
- Grant for construction of industrial or commercial premises in areas of high unemployment
- Incentives for the construction of certain types of project such as private housing. Influence construction activity through the development, repair or maintenance of project (Ashworth, 1999).

Further to these, the activities if the construction industry contributes significantly to the nation's gross domestic product (GDP) which is a measure of the volume of national output

and input. British construction industry in the late 1980s accounted for about 6% of GDP when if experienced a rapid growth with a total value of output reaching almost £50bn by 1990 (Ashworth, 1999). In addition, the industry generates high percentage of gross fixed capital formation (G.F.C.F.) which are manufactured abet to productions such as hospitals, flats and machines.

In financial terms, the industry converts financial investment into physical assets which enable other economic activities to take place. Bhalla et al (1983) revealed that in both developed and developing nations, the construction industry usually accounts for over 50% of fixed capital formation.

In Ghana, an overall GDP growth rate of 5.8% and 6.2% were realized compared to the targeted 5.8% and 6.0% in the year 2005 and 2006 respectively. Figures produced by the statistical service indicate that the industry grew form 7.0% in 2006 and a target of 8.2% is expected at the end of 2007 and this is a result of the increased in road construction and other infrastructural developments undertaken throughout the country (2006 and 2007 Budget Statement). The construction industry also contributes to the level of imports in three ways;

(i) by its need for plant to process raw materials and physically execute construction projects;

(ii) by the direct importation of buildings and components to supplements to supplement domestic production and

(iii) by the use of design and implementation expertise provided by foreign consultants and contractors.

On the other hand, it contributes to exports by the sale of building products and other raw materials which constitute the basis of these products (Bhalla et. al, 1983).

A United Nations Environment Programme (UNEP) report has noted that about one-tenth of the global economy is dedicated to constructing and operating homes and office. It further reported that the industry consumes 16.67% to 50% of the world's wood, minerals water and energy. The industry generates employment and income for about 7%, 8% and 5.5% of Europe, United States and Turkey's workforce respectively (Kazaz et 2008). According to the 2000 Population and Housing census, out of 9,039,318 of Ghana economically active population of age 15years and above, 2.3% were engaged in the construction industry placing the industry 9th to offer employment among the 17 industries of the Ghanaian economy (Population and Housing Census Report, 2001. It has been projected further that 3.08% of the economically active population of 13,468,288 are engaged in construction in 2007 (Ghana Statistical Service, 2007). Strassmann made some interesting comparisons between construction and manufacturing industries in terms of changes in the overall level of output. This, Strassmann suggested that an early stage of development, construction activity outstrips manufacturing and as the economy develops, construction activity slows down relative to manufacturing and then latter overtakes construction (Bhalla et. al, 1983)

2.3 Human Resource Management

Enterprise competitiveness is based more and more on the quality of the human resource of the enterprise. Good human resource management (HRM) thus becomes an important cornerstone of an enterprise competiveness strategy. Being an integral part of the strategic management of the enterprise, the various HRM policies, functions and practices should constitute

to the creation and sustenance if the enterprises competitive advantage (Zhou, 2006). Thus, the development of the culture of productivity and creativity, the building-up of mutual trust and shared values, initiative and self-management, and multi-skilling and skills upgrading and continuous learning must always be priority goals of the various HRM functions of human resource planning, staffing, and allocation; human utilization; human resource development and motivation and commitment-building. Trust and shared values appear as central mechanism for work coordination and control in a flexible enterprise (Mojahed, 2005). When work is complex and constantly changing, "direct control" based on supervision becomes too expensive and unwieldy, and "bureaucratic control" based on work standardization, rigid systems and procedures and rules and regulations is not workable and is counter-productive (Majahed, 2005). Organizations must rely more on "self-management" (Heizer and Render, 1999).

This form of internalized control is built on mutual trust and confidence, shared values, and common understating and acceptance of the organization's or corporate objectives, philosophies, priorities and norms. In this sense, information sharing becomes very important. Committed, motivated and capable employees at all levels are essential to gaining sustained competitive advantage, (Heizer and Render, 1999).

In Australia research work elated to factors affecting productivity such as rework and worker's performance and motivation was performed by Edwards and Love.

2.4 The Organisation of Construction Activities

Organization is where two or more people have come together to work as a team in a structural or in a systematic approach to achieve a common goal. Human relation has also been frequently used as a general term to describe the approach of managers interact with their

employees. When 'employee-management' stimulates more and better work, the organization has effective human relations.

The firm's human relations are said to be ineffective when its morale and efficiency deteriorates. An organization's most important resources are the people who supply the work, talent, creativity to the organization. This is more obvious in the case of building construction industries/sites.

It is interesting to note that as part of the great advances made in utilization of plants. The building construction industry seems setting a high labour intensive and that personnel function or human resource management function necessitates the smooth growth in the construction industry.

2.5 The Management of Human Research in Construction

The term management refers to the practices organized human activity of a firm. The manager is concerned about the output of the work ensures management responsibility for planning and regulating proper procedures. Also ensuring the co-operation of personnel by providing the will to work guidance and supervising their activities. Management is a variable of production that ensures that labour and capital are effectively used to increase productivity. Its other function is to foresee problems well in advance and determine solutions before they arise. Irrespective of the influence labour has on productivity, ineffective management has also been cited as the primary cause of poor productivity more than an unmotivated and unskilled workforce. Managers are responsible for productivity improvement and this can be achieved through planning, proper selection, control and utilization of resource, supply of information and feedback, motivation of operatives and must remain committed to productivity. A pilot study conducted in the Canadian construction industry among experts with an average of 27 years revealed that m three management

is the top-rated diver of the productivity three categories of management, human and external factors (mojahed ,2005. Effective operations managers build workforces and organizations that recognize the continuing need for education and knowledge. They ensure that technology, education, and knowledge used effectively and more effective utilization of capital, as opposed to the investment of additional capital, also important. The manager as a productivity catalyst is charged with the task of making improvement in capital productivity within existing constraints. Productivity gains in knowledge advanced societies require managers who are comfortable with technology and management science (Heizer and Render, 1999).

It is important to know that when there is cordial human relation between the building team-the client, the design team, the structural engineer, the quantity surveyor, the contactor and the laborers efficiency becomes the target hence increase productivity.

2.6 The Resources to Manage

The main resources in construction productivity are Labour, Material, Plant (Capital Investment).

2.6.1 Labour

Labour which otherwise known as human resources widely been recognized as being vital in every organization yet industry have a momentous task in forecasting and planting its manpower requirements which enables the full utilization of this resource. In view of its importance, there is the need to improve it. Labour has been found to account for a third of the total direct capital cost of construction projects (Akindele, 2004). However, only a third to one a half of workers' time is spent directly on work activities productively (Thomas et al,2003). The cost of construction labour

has risen in recent years since workers always make demands for higher pay and fringed benefits. Improvement in the contribution of labour to productivity is the result of a healthier, better – education, better- nourished labour force and at times shorter work week (Heizer and Render, 1999).

2.6.2 Labour Output at the Job Site

Contractors and owners are often concerned with the Labour activity at job sites. For this purpose, it is convenient to express Labour productivity as functional units per Labour hour for each type of construction task. However, even for such specific purposes, different levels of measure may be used. For example, cubic yards of concrete placed per hour is a lower level of measure than miles of highway paved per hour. Lower-level measures are more useful for monitoring individual activities, while higher-level measures may be more convenient for developing industry-wide standards of performance. While each contractor or owner is free to use its own system to measure labour productivity at a site, it is a good practice to set up a system to which can be used to track productivity trends over time and in varied locations. Considerable efforts are required to collect information regionally or nationally over a number of years to produce such results. The productivity indices compiled from statistical data should include parameters such as the performance of major crafts or project size, type and location, and other major project influences.

In order to develop industry-wide standards of performance, there must be a general agreement on the measurers to be useful for compiling data. Then, the job site productivity data collected by various contractors and owners can be correlated and analysed to develop certain measures for each of the major segment of the construction industry. Thus, a contractor or owner can compare its performance with that of the industry average.

2.6.3 Factors Affecting Labour Output.

Job-site productivity is influenced by many factors which ca be characterized either as labour characteristics, project work conditions or a non-productive activity.

The Labour characteristics include:

- age, skill and experience of workforce
- leadership and motivation of workforce

2.6.4 Labour Relations in Construction

The market demand in construction fluctuates greatly, often within short periods and with uneven distributions among geographical regions. Even when the volume of construction is relatively steady, some types of work may decline in importance while other types gain. Under an unstable economic environment, employers in the construction industry place great value on flexibility in hiring and laying off workers as their volumes of work wax and wane. On the other hand, construction workers sense their insecurity under such circumstances and attempt to limit the impacts of changing economic conditions through labour organizations.

There are many crafts in the construction labour forces, but most contractors hire from only a few of these crafts to satisfy their specialized needs. Because of the peculiar characteristics of employment conditions, employers and workers are placed in a more intimate relationship than in many other industries. Labour and management arrangements in the construction industry include both unionized and non-unionized operations which compete for future dominance. Dramatic shifts in union in unionization can occur. For example, the fraction of trade union members in the construction industry declined form 42% in 1992 in 1992 to 26% in 2000 in Australia, a 40% decline in 8 years.

2.6.5 Unionized Labour in Construction

The craft unions work with construction contractors using unionized Labour through various market institutions such as jurisdiction rules apprenticeship programs, and the referral system. Craft unions with specific jurisdiction rules for different trades set uniform hourly wage rates for journeymen and offer formal apprenticeship training to provide common the equivalent skill for each trade. Contractors, through the contractors' associations, enter into legally binding collective bargaining agreements with one or more of the craft unions in the construction trades. The system which binds both parties to a collective bargaining agreement is referred to as the "union shop". These agreements obligate a contractor to observe the work jurisdictions of various unions and to hire employees through a union operated referral system commonly known as the hiring hall. Contractors and craft unions must negotiate. The purpose of trade jurisdiction is to encourage considerable investment in apprentice training on the part of the union so that the contractor will be protected by having only qualified workers perform the job even though such workers are not permanently attached to the contractor and thus may have no sense of security or loyalty. The referral system is often a rapid and dependable source of workers, particularly for a contractor who moves into a new geographical location or starts a new project which has high fluctuations in demand for Labour. By the large, the referral system has functioned smoothly in providing qualified workers to contractors, even though some other aspects of union operations as not as well accepted by contractors.

2.6.6 Non-unionized Construction

In recent years, non-union contractors have entered prospered in an industry which has a long tradition of unionization. Non-union operations in cos. This practice is refer to as construction are referred to as "open shops". However, in the absence of collective bargaining agreements,

many contractors operate under policies adopted by non-union contractors' association. This practice is refer to as "merit shop", which follows substantially the same policies and procedures as collective bargaining although under the control of a non-union contractors' association without participation. Other contractors may choose to be totally "unorganised" by not following either union shop or merit practices. The operations of the merit shop are national scope, except for the local or state apprenticeship and training plans. The comprehensive plans of the contractor' association apply to all employees and crafts of a contractor regardless of their trade. Under such operations, workers have full rights to move through the nation among member contractors of the association. Thus, the non-union segment of the industry is organised by contractor' associations into an integral part of the construction industry.

However, since merit shop workers are employed directly by the construction firms, they have the greatest loyalty to the firm, and recognise that their own interest will be affected by the financial health of the firm. Playing a significant role in the early growth and continued expansion of merit shop construction is the associated Builders and contractor association. By 1987, it had a membership of nearly 20,000 contractor networks of 75 chapters through the nation. Among the merit shop contractors are large construction firms such as Flour Daniel, Blount International, and Brown and Root Construction. Advantages of merit shops as claimed by its advocates are:

- The ability to manage their own work force
- Flexibility in making timely management decisions
- The emphasis on making maximum usage of local force
- The emphasis on encouraging individual work advancement through continued development of skills
- The shared interest that management and works have in seeing an individual firm prospers.

2.6.7 Regional Bargaining

Currently, the geographical area in a collective bargaining agreement does not necessarily coincide with the territory of the union and contractors' associations in the negotiations. There are overlapping of jurisdictions as well as territories, which may create successions of contract termination dates for different crafts. Most collective bargaining agreements are negotiated locally, but Regional agreements with more comprehensive coverage embracing a number of states have been established. The role of national union negotiators and contractor' representatives in local collective bargaining is limited. The national agreement between international unions and a national contractor normally binds the contractors' association and its bargaining unit. Consequently, the most promising reform lies in the broadening of the geographic region of an agreement in a single trade without overlapping territories or jurisdictions.

2.6.8 Multi-Craft Bargaining

The treatment of interrelationships among various craft trades in construction presents one of the most complex issues in the collective bargaining process. Past experience on project agreements has craft trade unions and a contractor for the duration of a project. Project agreements may reference other agreements on particular points, such as wage rates and fringe benefits, but may set their own working conditions and procedures for settling disputes including a commitment of no-strike and no-lockout.

This type of agreement may serve as a starting point for multi-craft bargaining on a regional, non-project basis.

2.6.9 Improvement of Bargaining Performance

Although both sides of the bargaining table are to some degree responsible for the success or failure of negotiation, contractors have often been responsible for the poor performance of collective bargaining in construction in recent years because local contractor' association are generally less well organized and less professionally staffed than the unions with which they deal. Legislation providing for contractors' association accreditation as an exclusive bargaining agent has now been provided in several provinces in Canada. It provides a government board that could hold hearings and establish an appropriate bargaining unit by geographic region or sector of industry, on a single trade or multi trade basis. In the unionized workplace, the labour – management relationship can be a powerful mechanism for managing conflict productively and equitably, and a tool for innovation and progressive employment relations.

2.6.9.1 Material

Material plays a critical role in the achievement of productivity. According to McCaffer and Harris (2001), material forms 50% of the cost profile of the construction industry. They further state that a reduction of a small percentage in the cost of material will go to increase profit significantly. This by inference indicates an improvement in productivity. For example, 2% reduction in material wastage could increase profits by much more than had it been on overheads. It is obvious that any appreciable waste is a significant item of cost and represent a great loss to the company in question and the nation's resources as a whole thereby decreasing the its productivity.

2.6.9.2 Capital

Capital investment provides tools, plant and machinery which human beings utilise in production. Inflation, interest rates, taxes increases the cost of capital making capital investment increasingly expensive. When the capital investment per worker decreases, there will be a corresponding decrease in productivity. In using labour rather than capital may reduce unemployment in the short run, this continually brings in a continuous change in the balance between capital and labour (Heizer and Render, 1999). In the 1930's work progress Administration (WPA) constructed swimming poor in the parks of New York City. Much of the excavation for each poor was executed by men with shovels and pick axes, the concrete was hand mixed and carried; the titles were laboriously set. The project was scantily criticised as were many WPA projects as wasteful and inefficient. Articles were written showing the use of labour-saving equipment could have reduced the cost per pool; how the same funds could have produced more pools and so forth (Wiredu, 1989).

2.7 PRODUCTIVITY

By definition of productivity is the same as efficiency, which is defined as the ratio of output energy divided by input energy. The short and simple answer is why is productivity important to measure? From of the above ratio it will indicate how efficiently you are utilizing limited resources. It follows that this can serve as a management tool and ensures that the company is more competitive, in the long term this with determine the success of the company. It then follows to ask the following questions; how do you measure and compare productivity?

Productivity in general has also been defined in the Cambridge International and Oxford Advance Learner's dictionaries as the rate at which goods are produced with reference to number of people and amount of materials necessary to produced it. On the other hand, productivity has been defined as the utilization of resources in producing a product or services (Gaissey, 1993). It has further been defined as the ratio of the output (goods and services) and input (Labour, capital or management). The definition of productivity is utilised by economists at the industrial level to determine the economy's health, trends and growth rate whiles at the project level, it applies to areas of planning, cost estimating, accounting and cost control (Mojahed, 2005).

2.7.1. How Productivity is Measured

Most measurement of productivity in New Zealand is made at the aggregate (whole economy) level. There are no official measures of industry productivity within New Zealand and only a few studies that estimate industry-level productivity as can be derived from the above quotation it is clear that to measure the productivity of the whole construction industry is not an easy task. The use to work-studies is limited to only a few trades. It is logical that the comparison of bricklaying time studies and that of concrete pouring will only provide a partial answer to the question affecting the whole of building sector. A study of this nature will not be utilized as it will take too long and secondly not give an accurate picture of the productivity of the entire construction sector.

This has been given a mathematical expression as follows:

Productivity = Output- Input (Heizer and Render, 1999)

Clearly, it can be seen from the mathematical expression that productivity will increase when output increase with input being constant or decreasing input with output constant. The United

States for almost hundred years, was able to increase productivity at an average rate of 2.5% per annum and that doubled their wealth every thirty years (Heizer and Render, 1999).

Productivity improvement can be realised if the following factors can be accomplished.

(i) Faster set-up of machine tools

(ii) Better quality control

(iii) More flexible in changing product specification

(iv) Proper material handling

Surely, there exist a positive correlation between productivity and some variables namely: Labour; Material; Capital; and Management. Total factor productivity gives a more general definition of productivity and it takes into consideration the combination of various input factors and it measured as follows:

Total factor productivity =Total Output

That is Labour + material + equipment + energy + capital + management

Construction productivity carry immense consequences for the national economy as a whole, however it remains one of the least understood subjects in. The Bureau of Labour Statistics maintains productivity indices for all industries of the national economy except for the construction industry due to inadequate data (Haas et al, 1998).

2.7.2 Factors Affecting Labour Productivity

Several factors affect labour productivity and prominent among them is the basic education for any effective labour force. In addition to the above is the diet of the labour force and social overhead such as transportation and sanitation (Heizer and Render, 1999). Furthermore, motivation, team building, training and job security have a significant bearing on

the labour productivity. Coupled with the afor-stated factors, labour productivity cannot be achieved without maintaining and enhancing the skills of labour and human resource strategies. Better utilized labour with stronger commitment and working on safe jobs also contribute to affect labour productivity (Wiredu, 1989).

2.7.3 Factors Affecting Job-Site Productivity

Job-site productivity can also be influenced by factors which can be characterized project work conditions or a non-productive activity. The project work conditions include among other factors:

- Job size and complexity
- Job site accessibility
- Labour availability equipment utilization
- Contractual agreements
- Local climate
- Local cultural characteristics, particularly in foreign operations.

The non-productive activities associated with a project may not be paid by the owner, but they nevertheless take up potential Labour resources which can otherwise be directed to the project.

The non-productive activities include among other factors.

- Indirect Labour required to maintain the progress of the project
- Rework for correcting unsatisfactory work
- Temporary work stoppage due to inclement weather or material shortage
- Time off for union activities

- Absentee time, including late start and early quits
- Strikes

Each category of factors affects the productive Labour available to a project well as the on-site Labour efficiency.

2.8 The Role of Management in Construction Productivity

Majahed (2005) and Oglesby et al. (1989) defined motivation as inciting unconscious and subconscious forces in people to achieve particular behaviors by them. It is, therefore, important that a motivational climate be developed for workers to perform more efficiently, thereby causing and increase in the construction productivity (Mojahed, 2005). In the classical theory by Taylor, (one of the widely recognized theorists on leadership and management), it is believed that the basis of increasing productivity was more of technology and, therefore, demanded that leaders should enforce pre-established productivity criteria to meet fixed goals. Mayo, on the other hand, postulated the humanist theory and stated that the role of a leader is to attain goals by the provision of opportunities for growth and development for the workers. Productivity improvement would be possible if workers are allowed to contribute their quota in all operations of a company. Leadership, therefore, remains the most single important aspect of enhancing productivity on construction projects. Everyone therefore on a construction project is, therefore, a leader as a result of the role played in different ways at different ways at different times whilst working towards the fulfilment of concept of a leader. They, therefore, demonstrate the willingness to react to worker environmental needs which in effect will motivate them to work at their highest level. Democracy, therefore, needs to be practiced to allow for broader participation of team members (Berg and Magnus. 1999; Olabosipo et al 2004). Business roundtable (1989) edition of motivation in the construction industry reported that foremen are often unable to

motivate the average craftsman today but suggested that craftsmen will motivate themselves given the right conditions and opportunity. Management of construction on site is in this instant said to start from the foremen and can have an impact on the performance of the workforce hence the productivity as a whole. A study conducted on 703 construction workers revealed that foremen have a strong impact on worker motivation, performance and satisfaction. The onus, therefore, lies on management to assign qualified foremen from whom subordinates will derive inspiration from their qualities. This will persuade workers to always work productively.

2.8.1 Work Environment

According to Mojahed, the elimination of negative attitudes on a job that requires management of perception such as asking questions and getting feedback will foster a motivational and productive environment. Couple with these, Chase (1993) stated that combining training, orientation for new workers, provision of safe environment, encouragement of two-way communication, worker participation in planning and decision making, and individual / team recognition may be utilized to achieve worker satisfaction goal. Oglesby (1989) in Majahed (2005) studied individual work situation and pointed out that pay ranked top in importance. It has been generally believed by builders that workers' wages become an important motivational factor and incentive compensation has a direct and beneficial effect on productivity; more pay results in more productive work (Mojahed, 2005.). since workers are directly responsible for carrying out construction works, suitable motivation is necessary for maximizing their productivity.

2.8.2 Workers Expectation

Olomolaiye et al (1989) also quoted by Olabosipo et al (2004) stated that, pay is a lower level motivator and should no be treated as a prime motivator. Majahed (2005) in his study into

project improvement system for effective management of construction projects cited Lui (2002) research which revealed that workers with more experience and education expect higher pay than those with less experience and education. The findings also elaborated that when workers are underpaid relative to their expectation or to other workers with comparable skills and demographic characteristics, they tend to reduce their effort which in effect impact on productivity negatively. These confirm Adams' equity and Vroom's expectancy theory respectively. In a study of the impact of non-financial incentives on bricklayer's productivity in Nigeria, it was ascertained that non-financial incentive schemes are the preferred methods of motivating operatives and these goes to improve significantly the productive time of operatives between 6% to 26%. Small firms in the above-mentioned study were seen to have absolute preference for non-financial incentive schemes that do not have capital outlay due to reasons of affordability (Olabosipo et al, 2004). According to Borcherding (1978) five peculiar motivational problems encountered on large construction projects are: minimal knowledge about the project; lack pf participation in decision-making; inadequate communication and coordination between crews and supervisors, detrimental changes in the work, as well as supervision and supervisors, detrimental changes in the work, as well as supervision and manpower that reduce learning curve efficiency improvement.

2.8.3 The Role of Foremen

Clarke and Morris (1980) study on of U.S. workers to determine attitudes towards productivity as quoted by Majahed (2005), it was established that involvement in decision-making, recognition through rewards, and job security are important motivational factors for workers to work harder to give out their best. However, in the study of impact of non-financial incentives on bricklayers' productivity in Nigeria, job security was assigned the least importance

by both management and the bricklayers. The issue of low priority placed on job security might be due to the transient and ad-hoc nature of labour (Olabosipo et al, 2004). (Zakeri et al, 1997) in a survey of construction operatives in Iran also revealed that fairness of pay, good relation with workmates, overtime payments, bonuses, and good safety programs were the motivational factors that exist on Indonesia projects. Furthermore, disrespect from supervisors, little accomplishment, lack of cooperation among workmates, and unsafe working conditions were seen to be demotivators (Mojahed, 2005).

Further to the above, research into demotivating factors influencing the productivity of civil engineering projects in Hong Kong showed that foremen changes and incompetence were rated low. These was because workers took considerable pride in the work they accomplish and having work to be redone can be extremely dissatisfying (Thomas et al, 2003S). However, it has been established in the study of relationship between background of a project leader, qualification, leadership style and team composition were found to correlate positively with the overall project performance (Odunsami et al, 2003).

It is estimated that 6.5% excess of cost is observed through poor safety practices in construction (Haliigan et. a., 1994). It ca be inferred that record more that 6.5% of cost through accidents if safety is not adhered to. Occupational injuries can harm the reputation of firms, decrease productivity and in effect results in huge cost. According a Kazaz and Ulubeyi (2006) the cost of all accidents and work-related illness in the United Kingdom amount to 2-3% of total gross domestic product of the country. In the research into drivers of productivity among construction among construction workers in Turkey, Kazaz and Ulubeyi (2006) revealed that the construction sector has the highest total accidents on the job with 10.48%. according to Worker Health and Worker Safety Charter of Turkey, a doctor needs to be engaged on site if workers'

strength of the organization is at least 50 but the principle is generally followed when the number is much greater than 50. Managers, therefore, agree that employing a doctor on site do not only have the legal implication but rather economics as well as workers spend only 10-15 minutes in on-site consultation than a full day (Kazaz and Ulubeyi, 2006). Workers working in an environment where accidents or injuries frequently occur will always be extremely cautious at work and this will affect individual performance. There is, therefore, the need for adequate safety plans for workers that will change attitudes on work, enhance performance and this affect overall productivity.

2.8.4 Disputes at Workplace

In a study aimed at eliminating workplace conflict and instantly improving productivity conducted by the University of North Carolina as reported by Zimmerman (2006), it was observed that 78% of the respondents thought rudeness and incivility have increase in the last decade. In addition, 53% of the respondents lost work time worrying about a past or future confrontation with a co-worker whiles 37% cited that hostile confrontation caused them to reduce their commitment to the organization. Furthermore 28% of the respondents also said they avoid confrontational co-workers, thereby, loosing work time while, 22% put less effect into their work because of confrontation (Zimmerman, 2006). Five general motivational techniques mostly used in the industry were reported and these were goal setting, incentives, work facilitation, proper recognition and worker participation in decision-making (business Roundtable, 1989).

Further to these, research into demotivating factors influencing the productivity of civil engineering projects in Hong Kong showed that foremen changes and incompetence were rated low. These was because workers took considerable pride in the work they accomplish and having

work to the redone can be extremely dissatisfying (Thomas et al, 2003). However, it has been established in the study of relationship between project leadership, team composition that, with the exception of the profession or background of a project leader, qualification, leadership style and team composition were found to correlate positively with the overall project performance (Odunsami et al, 2003). In a 48 hour per worker per week representing 10.6% to 28.3%was caused by the major demotivation factors (Thomas et al, 2003). Allan and Sienko (1997) stated that management should recruit workers with high growth and development needs. When this category of workers is encouraged to achieve the said need, it will bring motivation which will further enhance performance.

2.8.5 De-motivational Factors

The existence of de-motivational factors could result in decline of workers' productivity and could lead to disputes as well, since workers feel they have no control over their work and what the produce. Some of the demotivation factors that reduce workforce productivity are:

- Lack of adequate planning and materials
- Improper scheduling
- Project confusion
- Frequent delays
- Constant disruption of job assignment
- Communication breakdown
- Unavailability of tools and equipment
- Overcrowded work areas and rework
- Unsafe working conditions

- Lack of recognition and training
- Disrespectful treatment
- Little feeling of accomplishment
- Little participation in decision making
- Lack of quality assurance
- Poorly trained foremen
- Poor supervision
- Restrictive procedure

Makulsawatudom and Emsley (2001) observed that, there were 8 factors which according to the craftsmen, affected productivity in Thailand construction industry. These factors were as follows:

- Lack of materials
- Lack of tools and equipment
- Incomplete drawings
- Overcrowding
- Poor site conditions
- Incompetent supervisor
- Rework and poor communication

Several researchers have carried out investigation into various productivity problems in various countries and all revealed different factors. Makulsawatudom and Emsley compared the observations made in Thailand to that of other researchers in different countries and revealed six factors which are most prevalent and have significant impact on construction productivity.

2.9 Motivation

Motivation refers to the desire to expand energy in order to achieve a common goal for a reward. It is the rewards that influence a person to strive to achieve a goal. Motivation can influence all fields of management and takes in numerable forms to initiate a specific desire for action. Every organization is concerned with what should be done to achieve sustained high levels of performance through its workforce. This means giving close attention to how individuals can best be motivated through means such as incentives, rewards, leadership etc. and the organization context within which they carry out the work (Armstrong, 2006). The study of motivation is concerned basically with why people behave in a certain way. In general, it can be described as the direction and persistence of action. It is concerned with why people choose a particular course of action in preference to others, and why they continue with chosen action, often over a long period, and in the face of difficulties and problems (Mullins, 2005). Motivation can therefore be said to be at the heart of how innovation and productive things get done within an organization (Bloisi et al, 2003). It has been established that motivation is concerned with the factors that influence people to behave in certain ways. The three components of motivation are namely:

- Direction: what the person is trying to do
- Effort: how hard a person is trying?
- Persistence: how long a person keeps on trying (Armstrong, 2006).

2.9.1 Characteristics of Motivation

Mitchell (1982) quoted by Mullins (2005) identified four common characteristics which underlies the definition of motivation namely:

- Motivation is typified as an individual phenomenon- every person is unique and all the major theories of motivation allow for this uniqueness to be demonstrated in one way or the other.
- Motivation is usually intentional: -motivation is assumed to be under the control of worker, and behaviors that are influence by motivation, such as effort, expended, are seen as choices of action
- Motivation is multifaceted: -the two factors of greatest importance are:
  i. What get people activated
  ii. The force of an individual to engage in desired behaviour
- The purpose of motivational theories is to predict behaviour: - motivation is not the behaviour itself, and it is not performance. Motivation concerns action, and the internal and external forces which influence a person's choice of action.

2.9.2 Concept of Motivation

The underlying concept of motivation is some driving force within individuals by which they attempt to achieve some goal in order to fulfil some need or expectation. This gives rise to the basic motivational model shown in figure 2.1 below. In this model, people's behaviour is determined by what motivates them. The ideas of Taylor, his rational economic concept of motivation and subsequent approaches to motivation at work has fueled the continuing debate about financial rewards as a motivator and their influence on productivity. In the job where their little pleasure in the work itself or it offers little opportunity for advancement in career, personal

challenge or growth, many people may be motivated primarily if not exclusively, by money. The performance is a product of both ability and level of motivation that is performance = f(ability x motivation).

Organisational success is dependent upon members being motivated to use their full talents and abilities, and directed to perform well in the right areas. According to Mullins (2005), a major international study by Proud foot Consulting revealed that, the most important reason for productivity loss was poor working morale. This includes absence of positive team spirit, low motivation, and poor sense of belonging, people feeling undervalued and poorly rewarded. It is in view of these that Allen and Helms (2001) suggested that different types of reward practice may more closely complement different generic strategies and are significantly related to higher levels of perceived organizational performance (Mullins, 2005). With a positive motivational philosophy and practice in place, productivity, quality and service should improve because motivation helps people towards achieving goals, gaining positive perspective, creating the power for change, building self-esteem and capability, and managing their development and changing others. Mullins cited Kreitner et al. (1999) suggestion which states that, although motivation is a necessary contributor for job performance, it is not only one. Along with ability is also a combination of level of skill; knowledge about how to complete the task; feelings and emotions; facilitating and inhabiting conditions not under the individual's control. The twelve basic human needs that have been around since the beginning of recorded history namely:

- Family
- Health and well-being
- Work/career
- Economic

- Learning
- Home/shelter
- Social relationship
- Spirituality
- Community
- Leisure
- Mobility
- Environment/safety

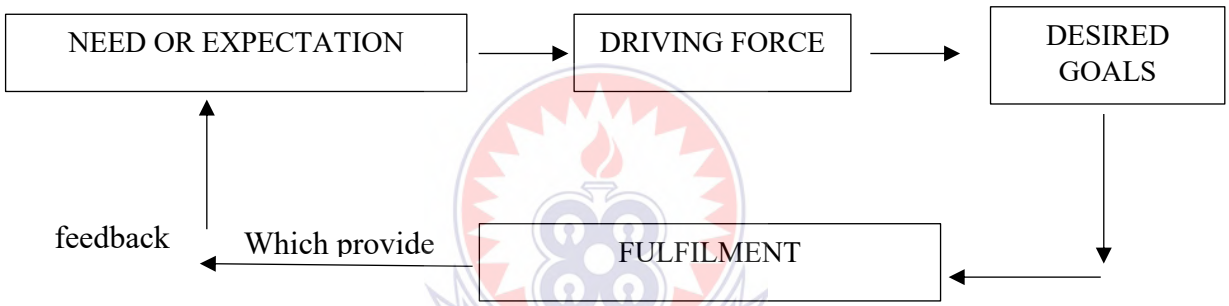


Figure 2.1 Illustration of basic motivational model (Mullins, 2005)

Illustration of basic motivation of basic motivational model (Mullins, 2005) "A culture has the power and authority not only to determine lifestyle but also to form individual personality traits, behaviours and attitudes". According to Cartwright (1999). Nine key motivational factors were revealed by Cartwright from the study into the psychology of total quality management namely:

- Identification: motivation through influencing others by what we say and do and influence by others in what we think and how we feel.

- Equity: - it is about what is fair. It is a balance between expectation and rewards, inputs and outputs, percentages and reality.
- Equality: - everyone should be treated with equal respect irrespective of status, and the concept of equal pay for equal people should be well established.
- Consensus: - the arrival of a mutual understanding that is much deeper and more inclusive than compromise and is dependent on shared values and social harmony.
- Instrumentality: - A tool or device by which something is effected, the agency or means by which to achieve an objective.
- Rationality: - introduce the idea of scientific approach to management and problem solving which is highly motivating.
- Development: - The motivation for self- improvement. Development of the individual and organisation through training and education.
- Group Dynamics: - positive group motivations are created through individual loyalty to the group, consensus and a mutual understanding of and commitment towards achieving group goals.
- Internalisation: - it determines our attitudes, convictions and behaviours and is the most powerful and permanent of the nine motivational factors (Mullins, 2005).

2.10 Frustration (Induced Behaviour)

- Frustration- it is a negative desired response to a blockage of a desired goal and results in a defensive form of behaviour. Frustration has many possible reactions and these can be summarised under four broad headings namely: aggression, regression, fixation and

withdrawal. These forms of reactions are not mutually exclusive as frustration- induced behaviour on job is combination of aggression, regression and fixation.

- Aggression: it is an attack on some person physically or verbally. It may be directed against the person or object which is perceived as the source of frustration and the actual barrier or blockage. Some examples of aggression are striking a supervisor, destruction of equipment or document, malicious gossip about the supervisor. A displaced aggression set in when the direct attack is not made because the source of frustration is not clear or specific; the source is feared such as powerful superior. The frustrated person finds an easier, safer person to direct the aggression towards and some of the reactions usually experienced are picking arguments with colleagues, being short-tempered and shouting at subordinates and kicking waste bins.
- Regression: - it is reverting to childish or more primitive form of behaviour. Examples of regression are sulking, crying, tantrums, or kicking a broken machine or piece of equipment.
- Fixation: - this is a persisting in a form of behaviour which has no adapting value and continuing to repeat actions which have no positive result. The inability to accept change or new ideas, repeatedly trying equipment which will clearly not work and insisting on application for promotion even though not qualified are examples of fixation.
- Withdrawal: - it is apathy, given up or resigning. Arising at work late and leaving earlier, sickness and absenteeism, refusal to accept responsibility, avoiding decision- making, passing work over to colleagues or leaving the job altogether.

2.10.1 Outcomes of Frustration

- Constructive behaviour – it is a positive reaction to the blockage of a desired goal and can take two main forms: problem solving or Restructuring.
- Problem – solving is the removal of the barrier- for example, repairing a damaged machine, or bypassing an uncooperative superior.
- Restructuring or uncompromising is the substitution of an alternative goal, through such a goal may be a lower order. Example of this is taking additional part-time job because of failure to be promoted to a higher grade or position.

2.10.2 Factors influencing frustration

Among the factors that determine a person's reaction to frustration are:

- The level and potency of need
- The degree of attachment to the desired goal
- The strength of motivation
- The perceived nature of the barrier of blocking agent and
- The personality characteristics of the individual.

It is important that mangers attempt to reduce potential frustration through ways such as:

- Effective recruitment, selection and socialization
- Training and development
- Job designed and work organizations
- Equitable personnel policies
- Effective communication

- Participative style of management
- Attempting to under individual's perception of the situation

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter seeks to provide information on the methods used in selecting the sample and collecting of date for the study. This include population, sample and sampling techniques and instrument used in collecting data and analysing of data.

3.2 Research Design

The study adopted a cross sectional survey research design involving the development and administration of survey questionnaires. Thus, the research started adopted was a quantitative research strategy.

A population is any entire collection of people, animals, plants or things from which we may collect data. It is the entire group on which conclusions are drawn.

The population used for the study were the workers from construction companies that have their Head Offices in these various places; Accra, Kumasi, Tamale and Bolgatanga. Targeted respondents comprised individuals at managerial level and construction professionals and tradesmen. Managers were asked to provide opinion on the effect of labour-management relationships that affect productivity on the construction sites. Artisans were on the other hand were asked to give their opinion of the effect of the selected factors and the significance these factors have on productivity or output.

3.3 Survey

A careful literature research was carried out to extract all the obtainable factors that labour-management relationship could motivate an individual at work and also impact on his/her output

when they are present. The source of this research work was published in professional journals, academic works, internet search and other relevant literature in different topics. A survey was then conducted in some construction practitioners in Tamale, made up of management, professionals and artisans were asked to rank the factors according to their relative importance. In addition, the perceptions of the extent to which the identified labour-management relationship factors influenced productivity were sought. From the outcome, inference on how to improve productivity without depriving anyone from the factors that will enhance labour-management relationship observed.

3.4 Design of Questionnaire

Structured to be self-administered questionnaires were employed for both preliminary and main surveys. Both sets of questionnaires consisted of closed and open-ended questions. Questions, response format and instructions were designed to ease the administration of the survey. The preliminary survey was to find the labour-management relationship at the construction sites and productivity level within some selected construction organizations and mechanism that can be put in place to enhance labour-management relationship and productivity as well. Two set of questionnaires were designed for the main study and were administered to the construction workers/employees and management/employers. Construction artisan' questionnaires were divided into three section whereas that of management had two section. The first set of questions was intended to seek information on the construction companies in which the various construction practitioners are employed. The second set of questions dealt with the demography of the construction workers or respondent (i.e. sex, age, educational level, trade/position, terms of employment, and years of experience and year working with the company). The third set of questions was related to labour-management relationship and productivity and was categorized.

Artisans were requested to provide their opinion on the labour-management relationship within the environment and productivity within the organization. In addition to these 4-points scales for labour management and productiivity were employed in the questions to indicate the degree of effect on the impact of labour management and the degree of significance of the selected factors on productivity. In relation to Labour-managekent, “1” represented low,”2” represented medium “3” represented high and “4” represented very high. In the case of productivity, “1” represejted not significant, “2” represented somehow significant, “3” represented significant and “4” represented vey significant in the case of productiivity.

Workers were therefore requested, based on their opinion or perceptions to tick where appropriate the degree of effect on labour-management relationship and their significance on productivity where the factors existed.

The questionnaire for management was divided into two sections. The first section sought information on the compnay, tanging from classification, years in existence and worker strength _i.e permanent , contract and casual). The second section dealt with the labour-management and productivity of the construction work. Management were requested to indicate the motivational and productivity levell of the construction workers. Furthermore, 4-points scales were used respectively in the questions on the degree of effect regarding motivation and the degree of significance of the selected factors of productivity.

In relation to motivation, “1” represent low, “2” represented medium and “3” represent high. With reference to productivity, :1” represent strongly not significant, “2” represented not significant, “3” represented average and “4” respresented significant. Management were, therefore, requested to tick where appropriate based on opinions, the degree of effect of labour-

management relationships and the significance on productivity of construction where the factors existed.

3.4.1 Sampling Technique and Sample Sizing

A purposive samplinig method was used to select the class of construction companies for the quessionnaires adminstration. The targeted group was contractors with classification D1. This class of companies was chosen for the study because of the large projects they undertake and the great number of workers they employ. In addition, non-empirical evidence shows that D1 companies have good organizational set up that lend to refined academic research work than the lower class of companies. In addition, snowball sampling was utilised attaining the sample size as a result of the difficulties encountered in assessing the population size of the class. Snowball sampling technique for finding research subject (Atkinson and Flint, 2001). This sampling technique gives the reseacher the name of another subject, who in turn provides the name of a third, and so on. This strategy can be viewed as a response to overcome the problems associated with concealed or hard-to-reach populations. According to Berg (1988) cited in Atkinson and Flint (2001), the process is based on the assumption that a 'bond' or 'link' exists between the initial sample and others in the same target population, allowing a series of referrals to be made within a circle of acquaintance. This was therefore implemented by acquiring initials list of contractors within the classification and contacts from Architectural engineering and Service Limited as well as the office of Works Department of Tamale Metropolitan Assemble. These leads were used to locate the offices of the first line of contractors from where the locations of subsequent contractors were obtained thus the snow ball approach was also used.

3.4.2 Administering of Quesionnaires

The questionnaires were administered to employers and employees and a maximum of two week duration was agreed to respond to the questions in the questionnaires. Furthermore, in the event where the respondents educational level was not adequate, assistance was given to answer the questions. A total of 180 questionnaires were administered to 15 sites out which 144 responses were obtainted representing 80% response rate. A total of 60 questionnaires were sent out to employers and 120 to employees respectively. A response rate of 46 and 93 representing 76.65% and 77.5% were received from employers and employees respectively. In view of different work schedules and progress of work at the visited sites, tandom samling used iin selecting the workers on each construction site visisted.

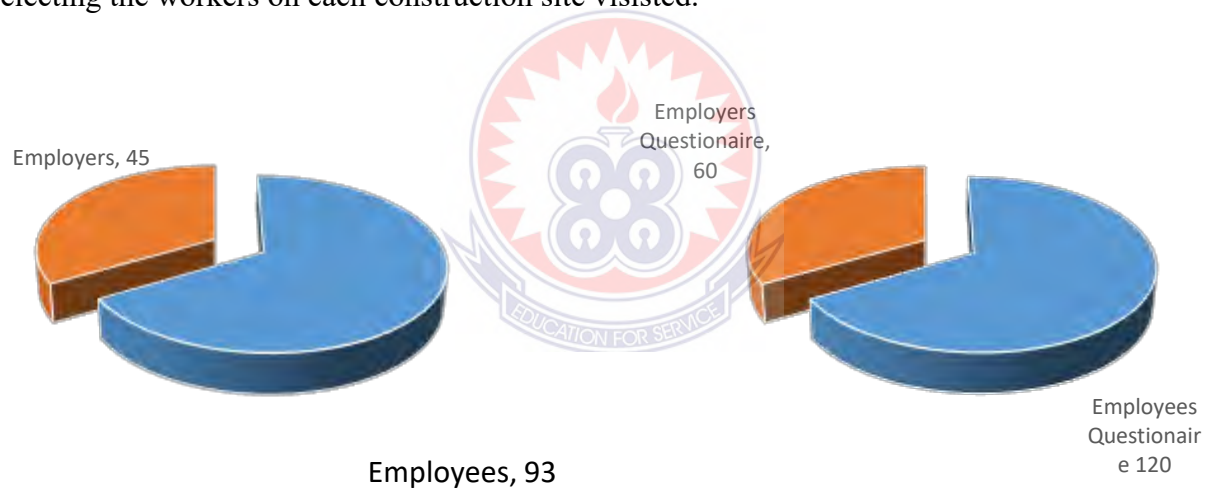


Figure 3.1 shows the distribution of questionnaires and the response rate respectively

3.4.3 Data Analysis

The researcher made use of a software programme which produces tables, and charts in analysing the data collected. Each question was analysed and the number of respondents who gave particular response was converted to percentage.

The opinion or responses with the highest percentage was considered as the general opinion of people with regards to that point. Statement about findings were therefore made taking the point into consideration.

CHAPTER FOUR

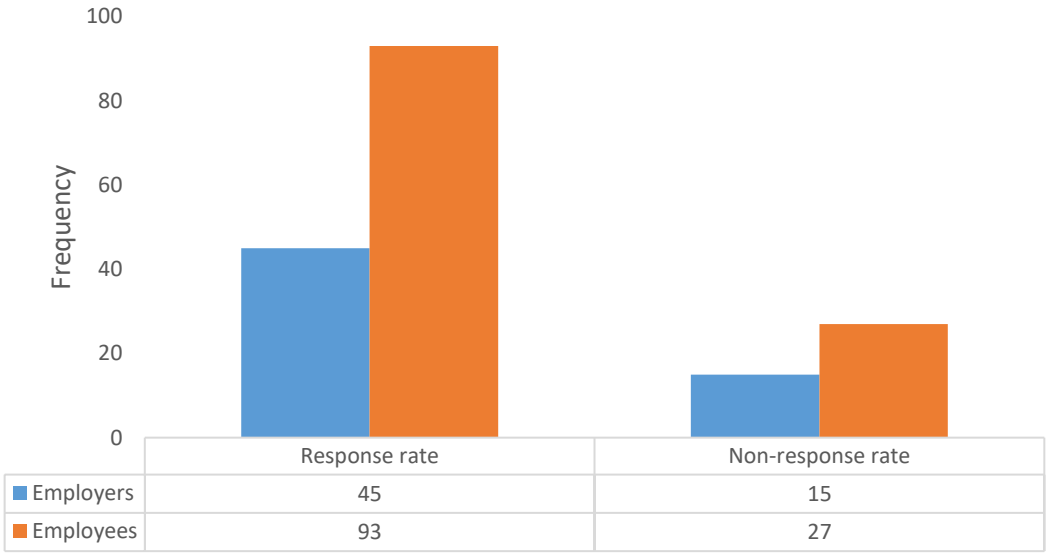
DATA ANALYSIS AND RESULTS

4.1 Introduction

In this chapter data is presented and discussed to address the research questions and objectives. The following are the main headings: respondents' characteristics, employers and Employees perception of consultant's client factors, Human and other Resources factors and Management of projects factors and discussion of results

4.2 Response Rate

Out of the 120 and 60 questionnaires sent for employers and employees of the some construction firms in Tamale Metropolis, 46 questionnaire were returned for employers and 93 for employees respectively, representing 76.65% and 77.5% response rate for both groups respectively (Figure1)



	Response rate	Non-response rate
Employers	45	15
Employees	93	27

Figure 4.1 Response Rate

4.3 Respondents Demographics

The characteristics of the respondents are presented in Table 1 for the two sub-groups

Table 4.1 Demographic profile of Respondents

Variables	Category	Employers (n=46)		Employees (n=93)	
		Frequency	Percentage	Frequency	Percentage
Gender	Male			82	87.2
	Female	-	-	12	12.8
Age	15-25	-	-	36	38.3
	26-35	-	-	27	28.7
	36-45	-	-	30	33.3
Years of work					
Experience	0-4yrs	-	-	39	41.5
	5-10	-	-	32	34.0
	11-20	-	-	18	19.1
Education level	Pre NVTI	-	-	12	12.8
	NVTI	-	-	7	7.4
	Tertiary	-	-	31	33.0
	Others	-	-	44	46.8
Job position	Foreman	-	-	13	13.8
	Mason	-	-	6	6.4
	Metal works	-	-	19	20.2
	Others	-	-	56	59.6
Profession	Qty surveyor	-	-	14	14.9
	Project mgr	-	-	10	10.6
	Engineer	-	-	39	41.5
	Others	-	-	31	33.0
Terms of	Permanent				
Employment		15	33.3	20	21.3
	Contract	15	33.3	42	44.7
	Casual	15	33.3	32	34.0
Length of	0-4yrs				
Service		3	6.7	70	74.5
	5-10	12	26.7	8	8.5
	11-20	6	13.3	12	12.8
	21+	24	53.3	-	-

The characteristics of the respondents are represented in Table 4.1. For the employers, in terms of their terms of employment, 33.3% of the employers have been employed permanently, 33% of

them were employers on contract, and 33.3% of them were casual employers. In terms, years of working with the firm, 6.7% of the employers had worked with their firms for up to 4 years, 26.7% of them had 5 years to 10 years working experience with the firms, 13.3% had been with the firm for between 11-20 years and 53.5% had worked with the firm for over 20 years.

Data from Table 1 for the employees show that, in terms of gender, 87.2% were males and 12.8% were females. 38.3% of the respondent were between the ages of 15-25 years, 28.7% were between 26-35 years, 33.0% were between 36-45 years, and this implies that a good number of them are young and old adults. In terms of working experience, 41.5% of the employees have 0-4 years, 34.0% were between 5-10 years, and 19.1% were between 11-20 years and 5.3% for others. In terms of educational background, 12.8% have pre-NVTI qualification, 7.4% have NVTI, 33.0% have tertiary qualification and 46.8% have other educational qualifications. In terms of job position, 13.8% of employees are foremen, 6.4% are masons, 20.2% are steel workers and 59.5% are of other categories. In terms of professionalism, 14.9% are quantity surveyors, 10.6% are project managers, 41.5% are engineers and 32.9% are in other categories. For terms of employment, 21.3% are permanent staff, 44.2% are on contract and 34.0% are casual staff. In terms years of working with the firm, 74.5% of the employees had worked with their firms for up to 4 years, 8.5% of them had 5 years to 10 years working experience with the firm and 12.8% had been with the firm for between 11-20 years

4.4 Employees Perception

4.4.1 Assignment of duties and target to employees

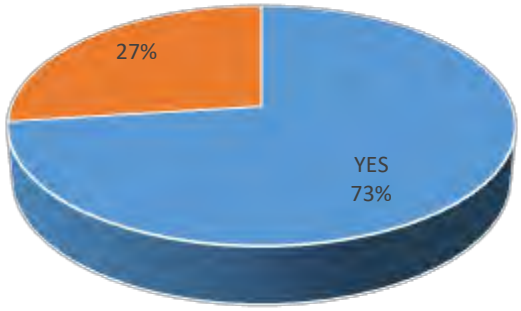


Figure 4.2

Respondents who have assigned duties and targets

Figure 4.2

Shows the number of employees who receive daily assigned duties and targets. It indicates that 27% of the employees are not been given any daily assigned duties to be achieved gut with their previous day's activity, 73% of them were given daily duties to be met by their supervisors

4.4.2 Cross tabulation

Tale 4.2 Cross tabulation of target assigned and achieved

		Achieving targets daily Yes		
		Yes	No	Total
Assigned duties and target	Yes	36 (64.3%)	20 (35.7%)	56
	No	12 (48%)	13 (52%)	25
Total		48	33	81

4.4.3 Employees target achieved

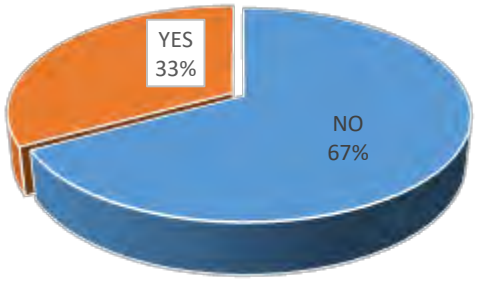


Figure 4.3 Respondent who achieved set target

According to figure 4.3, 67% of the employees do not achieve their target, and 33% if them actually achieved their targets. This indicates that most of the assigned duties and targets are not met due to various circumstances.

4.4.4 Employees feeling at work

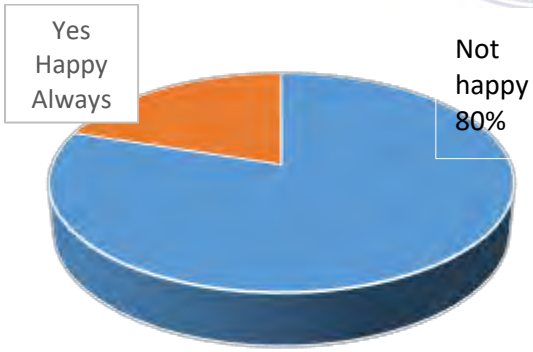


Figure 4.4 Respondents who feel happy when working

Figure 4.4 depicts the type of feeling workers have on the construction sites. 80% of the employees are always not happy on sites whiles working and 20% said they are happy on site during work.

4.4.5 Employees experience of strike action

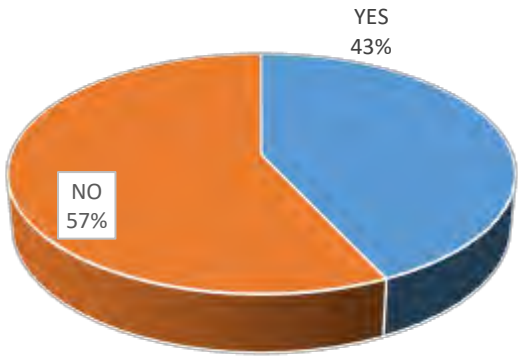


Figure 4.5 Respondents who have ever gone on strike before

According to figure 4.5, 57% of the employees have been on strike before, and 43% said they have not gone on strike before. This shows that majority of them have experience strike action since joining their respective firms.

4.4.6 Consultants Response on Factors Affecting Labour Management Relationships on Construction site Productivity

From Table 4.2, the consultant factors appear to have less negative effects on productivity on the construction projects sites, since the production team thus the direct work force takes instruction from supervisors to achieve set goals and targets. The results of the respondents rating are represented in Table 2 according to their relative effects and significance.

Table 4.3 Consultants Response on Factors

Raking	Consultants factors	Mean	Std. Deviation
1	Complex design to construct	1.87	0.72
2	Sluggish or slow response by clerk or works to inspect work	1.68	0.71
3	Delay in receiving detailed set of construction drawings in bulk leading to the work done in bits or small sections by consultant	1.52	0.71

According to Table 4.3, the highest ranked response is: complex design to construction with a mean of 1.87 and SD of 0.72. This is followed by sluggish or slow response by clerk of works to inspect work. The least rated response is. It therefore seems to suggest that the activities of the consultants do not adversely affects the productivity at the construction sites.

4.4.7 Clients Response of Factors Affecting Labour-Management Relationships on Construction Site Productivity

Clients' response on factors could be motivated by several reasons to have moderate negative effect on productivity on the construction project site, since the production team, thus the work force only rely on their supervisors to achieve set targets daily. The results of the response rating are represented in Table 4.3 according to their relative effect and significance.

Table 4.4 Client Factors Response

Raking	Consultants factors	Mean	Std. Deviation
1	Frequent changes in design and specifications results in constant interruption or work	2.03	1.04
2	Delay in payment in interim certificate	1.81	1.12
3	Unrealistic deadlines for project by client or consultant	1.55	0.91

From table 4.4, the highest rank response: Frequent changes in design and specifications that were perceived to have interrupted the direct working force with a mean of 2.03 and SD of 1.04. This is followed by delay in payment of interim certificate for works done for a period of time as stipulated in the contract agreement. The least rated response is unrealistic deadline from the client or consultant. It is therefore clear that the activities of the consultant do not adversely affect the productivity at the construction sites. Thus most workers on the construction site do not directly relate to the client demand and other conditions to perform their duties on site.

4.4.8 Human and other Resources Factors Affecting Labour-Management Relationships on Construction site Productivity.

Table 4.5 presents the reasons for Human and other Resources among the respondents of the company could be motivated by several reasons that would affect the productivity on the construction project site, since the productivity is directly related to the human and other resources as the life wire of each project and more over it has a direct relation to the daily activities on the construction site. It is therefore realised that opportunity to undertake

challenging task was rated the highest with a mean of 2.64 and SD of 0.09. The lowest is the cause of workers strike action due to delay in payment for work done, with a mean and SD of 2062 and 1.08 respectively.

Table 4.5 Human and other resources Factors Responses

Rating	Consultants factors	Mean	Std. Deviation
1	Opportunity to undertake challenging task (Being given goal to work towards it through your own directives)	2.64	0.90
2	Bargaining power (Negotiation for Bonuses and allowance)	2.62	1.08
3	Transportation (Vehicle at your disposal, allowance for transportation from a location to site and back)	2.50	1.10
4	Payment of overtime allowance (provision of extra money after normal working time)	2.49	1.22
5	Health and safety plans (Availability of first aid, availability of safety wears etc)	2.45	1.10
6	Salary (pay, wages etc.)	2.44	1.42
7	Employee training (introduction into new ideas, further studies, workshop etc)	2.38	1.26
8	Adequate & right equipment to work with (quick replacement and repairs of broken down and old equipment)	2.36	1.21
9	Impartiality and equity	2.31	1.21
10	Recognition with company achievements	2.30	1.25
11	Introduction of company policies to new employee and orientation to old personnel	2.25	1.18
12	Health services care(Particular hospital to attend in case of illness or subsidising the cost of hospital bills)	2.25	1.23
13	Belongingness and affection	2.23	1.19
14	Existence of labour union	2.21	0.83
15	Accommodation (provision of physical	2.18	1.16
16	Good communication skill (Flow of information)	2.12	1.14

17	Recruitment procedures (Are you happy with the processes)	2.05	1.28
18	Promotion (elevation, eg. From carpenter to carpenter foreman)	2.03	1.28
19	Cafeteria for employees (Having a place within the premise where food are given at break for free or at a reduced price)	1.95	1.00
20	Shortage of materials ono site whiles work is in progress	1.79	1.04
21	Congestion) overcrowding in a work are, improper site planning)	1.75	0.80
22	Disrespect from co-workers(use ofabusive language from colleagues, impolite speeches etc)	1.67	0.87
23.	Do workers strike due to delay in payment of works done	1.34	0.61

From the ranking it appears that the 1st to 4th ratings are moderately high, the 5th to 18th ratings appears to be medium whiles 19th to 22nd and the 23rd ratings suggest to be low and least respectively.

4.4.9 Project Management Factors Affecting Labour-Management Relationship On Construction Site Productivity

Project management factors indicate the effect on productivity on the construction project site appears to be directly related to every activity instruction from supervisors and management as to achieve set goals and targets. The results of the respondents rating are represented in Table 4.6 according to their rating affects the projects significantly.

Table 4.6 Management of Project Factors Response

Rating	Consultants factors	Mean	Std. Deviation
1	Job security (permanent job, payment of SSNIT etc.)	2.51	1.11
2	Worker participation in decision making (making suggestions & contributions)	2.37	1.03
3	Teamwork (Everyone contributing to the work, all hands on deck)	2.30	1.25
4	Supervision based on leadership by example	2.19	1.23
5	Complex design to construct	1.88	0.96
6	Contractor staff absenteeism (Crew members not being present for work)	1.75	1.01
7	Dependence of gangs of different trade to finish before another can continue	1.67	0.80
8	Work based on contract (Finish and go) instead of being employed	1.66	0.87
9	Making corrections on wrong construction work done (rework order)	1.61	0.72
10	Poor site layout leading to difficulty in movement	1.54	0.89
11	Working with unqualified persons(working with incompetent and non-confidence workers)	1.52	0.80
12	Excessive work load on few labour force	1.46	0.62

From Table 4.6, the highest ranked job security payment of SSNIT etc. with a mean of 2.51 and SD of 1.11 and is followed by workers participation indecision making thus making suggestions and contributions with mean and SD of 2.37 and 1.03 respectively. The least rated response is Excessive work load on little labour force. It is therefore seems to suggest that poor management of projects cold largely affects the productivity at the construction sites.

4.5 Employers Perception

4.5.1 Employers Who Assign Duties and Sets Target

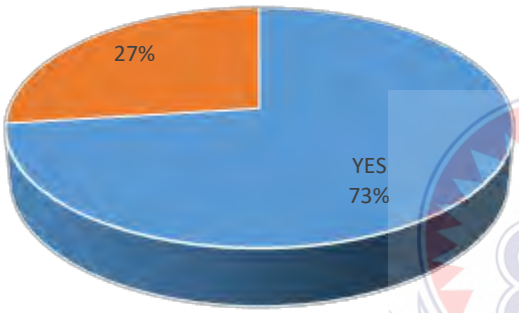


Figure 4.6 Respondents who assigned duties and targets

[figure 4.6, indicates the employers position on assigned duties and set targets for each day. 73% of them sets targets and assigned duties each day, 27% of them do not set targets for the workers but continued with their previous day's activities.

4.5.2 Employers who achieve their daily targets

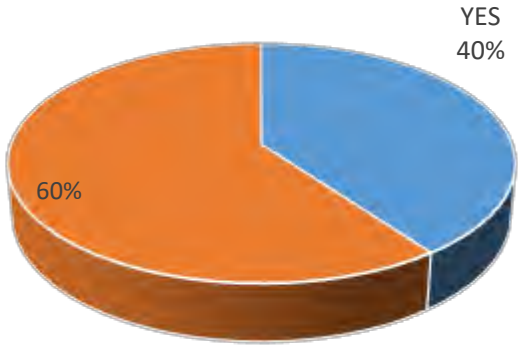


Figure 4.7 Respondent who met their assigned target

As shown in figure 4.7, 60% of assigned duties and targets are nor met in the day, however, 40% achieve their set targets and assigned duties for each day.

4.5.3 Employers who have knowledge about the mood of the employees at work

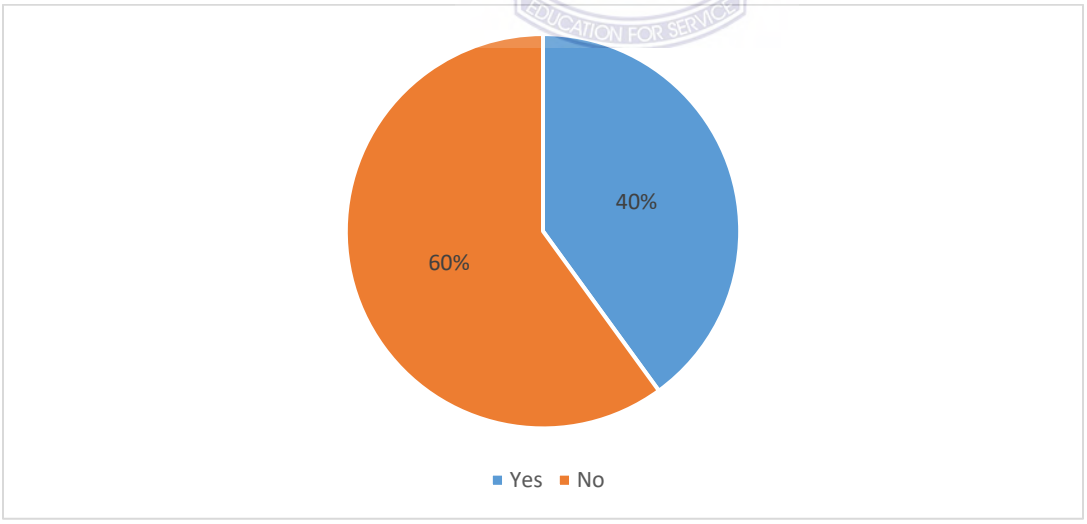


Figure 4.8 Respondents who feel happy always when working

Figure 4.8 depicts the knowledge of the mood of their workers on the construction site, 60% of employers do not know how their workers feel on the job, 40% did confirms of their knowledge of the mood of their workers.

4.5.4 Employers who experienced Strike action

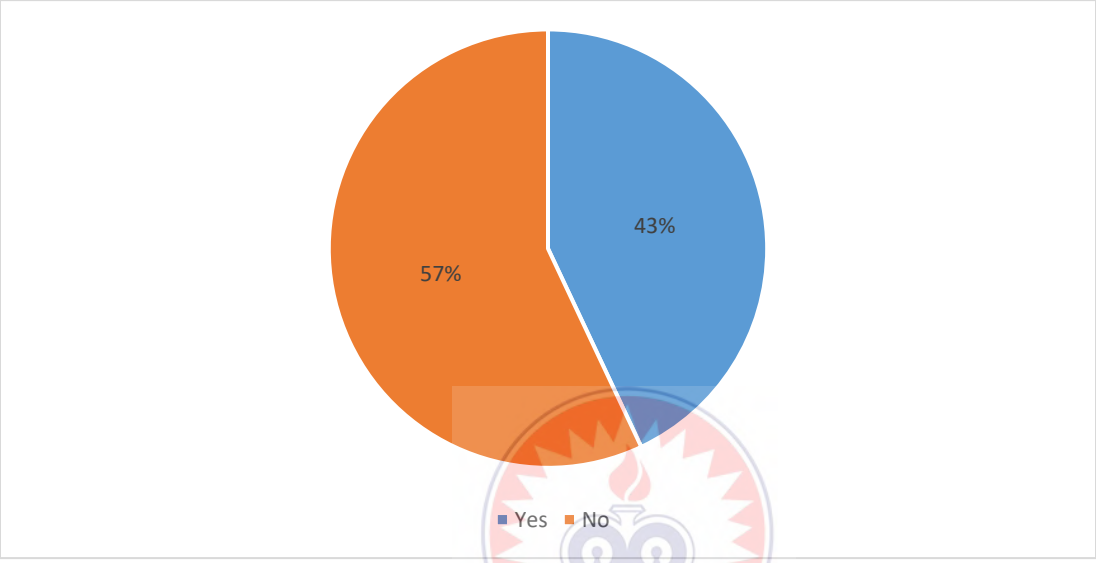


Figure 4.9 Respondent who have embarked on strike action

Figure 4.9 shows the number of firms or employers who have experience strike action by employees, 57% of employers have not experience strike action from their workers and 43% have experienced strike action.

4.5.5 Consultant factors affecting labour-management relationships on construction site Productivity

From table 4.7 the consultant factors appears to have lee negative effect on productivity on the construction project site, since the productivity on the site thus not directly relates to the work force who takes direct instructions from their supervisors to achieve their set goals and targets.

The results of the respondent's ratings are represented in the Table 6 according to their rankings do not affect the project significantly.

Table 4.7 Consultants Factors

Ranking	Consultant factors	Mean	Standard Deviation
1.	Complex design to construct	1.93	1.08
2.	Delay in receiving tailed set of construction drawing in bulk leading to the work done in bits or small sections by consultant	1.80	0.99
3.	Sluggish or low response by clerk of works to inspect work	1.6	.95

The highest ranked response is: complex design to construct, with a Mean of 1.93 and SD of 1.08. This is followed by delay in receiving tailed set of construction drawings in bulk leading to the work done in bits or small sections by consultant. The least rated response is sluggish or shows response by clerk of works to inspect work. It is therefore seems to suggest that the activities of the consultant do not adversely affect the productivity at the construction site.

4.5.6 Client Factors Affecting Labour-Management Relationship on Construction Site Productivity

Client factors could be motivated by several reasons that seem to have moderate negative effect on productivity on the construction project site, since the production team thus the direct work force only rely on their supervisor to achieve set goals and target daily. The result of the respondents rating are represented in Table 6 according to their relative effects and significance.

Table 4.8 Client Factors

Ranking	Client factors	Mean	Standard Deviation
1	Delay in payment of interim certificate	2.13	1.27
2	Unrealistic deadlines for project by client or consultant	1.53	0.82
3	Frequent changes in design and specifications results in constant interruption of work	1.40	0.50

From Table 4.8, the highest ranked is: Delay in payment of interim certificates with a mean of 2.13 and SD of 1.2. This is followed by unrealistic deadline for project by client or consultant for work. The least rated response if frequent changes in design and specifications results in constant interruption of work. It is appears therefore that the activities of the consultant do have effect on the productivity at the construction sites moderately.

4.5.7 Human and Other Resources Factors affecting Labour-Management relationships on Construction Site Productivity

Table 4.9 present the reasons for Human and resources among the respondents that could be motivated by several reasons to affect significantly the productivity on construction project site, since the productivity is directly related to the daily activities on the construction site. It is therefore realised that transportation or allowance for transportation from a location to site and back with a mean 3.07 and SD of 1.08. The lowest is the shortage of materials on site whiles work is in progress with a mean of 1.33 and SD of 0.60 were indications from the employers.

Table 4.9 Human and other resources factors

Ranking	Human and other resources factors	Mean	Standard deviation
1	Transportation (vehicle at your disposal, allowance for transportation, transportation from a location to site and back)	3.07	1.08
2	Salary (daily wages, weekly wages and monthly pay)	2.87	1.16
3	Good communication skills (Flow of information)	2.80	1.24
4	Payment of overtime allowance (Provision of extra money after normal working time)	2.67	1.31
5	Health and safety plans (Availability of first aid, and Personal protective equipment)	2.60	1.2
6	Adequate and right equipment for work (quick replacement and repair of broken down and old equipment	2.60	1.27
7	Health service care (Particular hospital to attend in case of illness or subsidising the cost of hospital bills)	2.60	1.16
8	Bargaining power (negotiation for bonuses and allowance)	2.55	1.16
9	Employees training (Introduction into new ideas, further studies and workshops	2.53	1.10
10	Introduction of company policies to new employees and orientation to old personnel.	2.53	1.16
11	Recognition with company achievements	2.25	1.16
12	Belongingness and affection	2..47	1.04
13	Promotion (elevation, eg. From carpenter to carpenter foreman	2.40	1.16
14	Opportunities to undertake challenging task(Being given goals to work towards with your own directives)	2.33	1.15
15	Accommodation (Provision of physical properties)	2.33	1.15
16	Impartiality and equity	2.27	1.20

17	Cafeteria for employees (having a place within the site where food served free during break or subsidized	2.13	1.22
18	Recruitment procedures (are you happy with the process)	2.07	0.97
19	Existence of labour unions	2.07	1.20
20	Disrespect from co-workers (use of abusive language from colleagues, impolite speeches etc)	1.16	1.09
21	Do workers strike due to delay in payment of works done	1.53	0.89
22	Congestion (overcrowding in a work area. Improper site planning)	1.40	0.89
23	Shortage of materials on site whiles work is in progress	1.33	0.60

From the ranking the first rating appears to be quiet high, the second to the twelve rating also appears to be high, from the thirteenth to the nineteenth rating are moderately high whiles from the twentieth to the twenty-third rating appears to be low.

4.5.8 Project Management Factors Affecting Labour-Management Relationships on Construction Site Productivity

From Table 4.9.1, Project management factors affects the productivity of construction projects and thus appears to be directly related to every activity instruction from supervisors and management as to achieve set goals. The results of the respondents rating are represented in Table 4.9.1 according to their ratings affect the projects significantly.

Table 4.9.1 Project management factors

Ranking	Project management factors	Mean	Standard Deviation
1	Teamwork (Everyone contribute to the work, all hands-on deck)	2.73	1.14
2	Job security (Permanent job, payment of SSNIT ect)	2.60	1.10
3	Supervision based on leadership by example	2.53	1.16
4	Work based on contract (Finish and go) instead of being employed	2.07	1.14
5	Workers participation in decision making (Making suggestion and contributions)	2.00	1.11
6	Making correction on wrong construction work done (Rework order)	1.80	0.84
7	Dependency on gangs of different trades to finish before another can continue	1.67	0.88
8	Complex design to construct	1.67	0.88
9	Contractor staff absenteeism (Crew members not being present for work)	1.47	0.89
10	Working with unqualified personnel (Working with incompetent and non-confidence workers)	1.47	0.89
11	Excessive work load on few labour force	1.40	0.81
12	Poor site layout leading to difficulty in movement	1.33	0.60

The highest rating from Table 4.9.1 is teamwork with a mean of 1.73 and SD of 1.14 and is followed by Job security, payment of SSNIT with mean and SD of 2.60 and 1.10 respectively. The least rated response is poor site layout leading to difficulty in movement. It is therefore seems to suggest that poor management of projects could largely affect the productivity at the construction sites.

CHAPTER FIVE

DISCUSSION OF RESULTS

5.1 Introduction

In this section the result of the study as presented in the table and figures above are discussed to address the research objectives and answer the questions.

5.2 Discussion of Research Questions

Discussion of the results presented in the above tables and figures is done to address the research objectives and answer the research questions for the study.

5.2.1 Research question one

What do construction firms employers know about the biodata effect of labour-management relationships productivity?

Despite the fact that most of the employers 53.3% have more than 21 years working experience with their firms (Table 4.1), and that 73% of them have some knowledge of daily assigned duties and targets and why they were not fully achieved due to relatively low educational background (Pre-NVTI). This might have accounted for why about 20% of the employees is considerably low, it poses a number of potential problems; notable among them are possible strike action and not achieving the daily target.

5.2.2 Research question two

What are the effects of good labour-management relationships on construction site in Ghana?

First of all, there is some evidence of good labour-management relationships. It appears that opportunity to undertake challenging task was rated the highest with a mean of 2.64 and standard deviation of 0.09 is an indication of increase in productivity. Other problems are what most of the employees have been experiencing. Notable among them is Figure 4.1 depicts the type of feeling workers have on the construction site. 80% of the employees are not always happy on site.

Zhou (2006) performed a study on motivating construction management professionals and conclude that motivation, when it is combined with work experience and education is an important factor in improving performance and productivity.

In this study, even though data from across tabulation in Table 4.2 seem to indicate that 64.3% assigned duties and target were achieved daily. From the picture and pattern of the results obtained, it can be interpreted that there exist a medium degree of agreement beyond chance. This mean that there is a medium probability of productivity on the construction site by respondents irrespective of trade or profession. It can therefore be inferred that response on labour-management relationships depicted variation across individuals, trades and professionals in the Tamale metropolis.

5.2.3 Research question three

What are the factors that contribute to low productivity on the construction site in Ghana?

In this study, first of all, results from the (Table 4.9) indicates that a considerable number of employers suggested that provision of daily transportation to and fro, consistent release or payment of their salaries and wages, good communication thus flow of information, availability of the right equipment to work with, infirmary for first aid, allowing for a labour union to

bargain for salaries, wages and allowances, in-service training and orientation to update old and new staff, awards and promotion scheme given them the challenging task thus setting targets for employees would be a good strategy of boasting their morale to increase productivity on daily bases and overall achievement. However, accommodation, equity, cafeteria service, fairness of recruitment, discipline amongst workers, avoiding of strike action, good site layout to avoid congestion and the elimination of shortage of building materials to work with are also issue that when critically employers consider to be areas that would increase productivity on the site.

From the above analysis and discussion strongly suggest that laws on labour management should be enforced to maximize to provide motivation which in turn increases productivity on site. The recommendation on how to enforce the labour Act would be discussed in the next chapter under appropriate heading.

5.3 Employees Perception

According to Table 4.1 employers (53.3%) having more than 21 years work experience with their firms, have some knowledge of daily assigned duties and target and why they were not fully achieved due to relatively low education background (pre-NVTI). This might have accounted for why about 20% of the employees who do not feel happy always. Since having knowledge of the mood of employees is considerably low, it poses problems and notably among them are possible strike action and not achieving daily target.

5.3.1 Daily Assigned Duties and Targets and supervised

Supervision has been shown to be an important factor is successful project execution in a number of studies (*Odusami et al*, 2003). It is not about necessarily getting the requisite tool woith which to work whch motivates but being with surbodinates to part take in solving work problems and ensure that the right thing is accomplished without always issuing instructions. This motivates supervisors or superiors and subordiantes. In a research into bricklayr's motivation and productivity, good supervision was found to be the most significant variable influencing rate of bricklaying (Olomolaiye, 1990). This indicates theat whenever a leader sets good example or workers feel supervisors are part of them based on the supervisors involvement in some of the daily work schedule, they will have the motivation to work harder and this will boost their performance and hence increase productivity. (Odusami et al, 2003) stated that the best leadership.

5.3.2 Recognition with Company Achievements

In addressing this research question, this subsection will cover the under listed concerns below.

First of all, there is some evidence of good labour-management relationships. It appears that opportunity to undertake challenging task was rated the highest with a mean of 2.64 and SD of 0.09 is an indication of increase in productivity. Other problems are what most the employees have been experiencing. Notably among them in Figure 4.4 depicts the type of feeling works have on the construction sites. 80% of the employees are not always happy on site.

Zhou (2006) performed a study on motivating construction management professionals and concluded that motivation, when it is combined with work experience and education is an important factor in improving performance and productivity.

In this study, even though data from the cross tabulation in table 4.2 seem to indicate that 64.3% assigned duties and targets were achieved daily. From the picture and pattern of the results obtained, it can be interpreted that there exist a medium degree of agreement beyond chance. This means that there is a medium probability of productivity on the construction site by respondent irrespective of trade or profession. It can therefore be inferred that responses on labour-management relations depicts variations across individuals, trades and profession in the Kumasi Metropolis and this fives a signal that daily assigned duties which are met indicate the quantum of productivity man hour lost.

5.3.3 Teamwork, Belongingness and Affection

What are the factors that contribute to low productivity on the construction site in Ghana?

In addressing this research question, this sub-section will discuss issue relating to consultants factors, client factors, human and other resources factors and project management factors among others.

5.4 Consultants Factors Perception of Factors

Employees view on the consultant's factors affecting labour-management relationships on construction sites productivity

It is evidenced from the results of the study, from the response from Table 4.3 the consultant factors appear to have less effect on productivity on the construction project site, since the production team thus the direct work force takes instructions from supervisors to achieve set goals and targets. The results of the respondent rating are represented in Table 4.3 according to

their relative effects and significance with the highest ranked response is: complex design to construction with a mean of 1.87 and SD of 0.72. This is followed by sluggish or slow response by clerk of works to inspect work. The least rated response is delay in receiving detailed set of drawing in bulk leading to work done in bits or small section. It is therefore seems, to suggest that the activities of the consultants do not adversely affects the productivity at the construction sites.

These responses from the employees indicate that, the activities of the consultant are not considered issues when it comes to daily productivity at their various construction sites.

5.5 Client Factors

Client factors affecting labour-management relationships on construction site productivity

According to the data in Table 4.4, generally it appears the client factors could be motivated by several reasons to have moderate effect on productivity on the construction project site; however, the production team, thus the direct work force only relies on their supervisors to achieve set goals and targets daily. The results of the respondents rating are represented in Table 4 according to their respective effects and significance. From table 4, the highest ranked response is: frequent changes in design and specification that were perceived to have interrupted the direct working force with a mean of 2.03 and SD of 1.04 and followed by delay in payment of interim certificate for works done for a period of time as stipulated in the contract agreement. The least rated response is unrealistic deadline from the client or consultant. Its therefore seems to suggest that the activities of the consultant do not adversely affects the productivity at the construction sites.

Thus, most workers on the construction site do not directly relate to the client demand and other conditions to perform their duties on various sites.

5.6 Human and Other Resources Factors

Human and other resources factors affecting labour-management relationships on construction site productivity

From table 4.5, the rankings appear that from 1st to 4th ratings are moderately high, the 5th to 18th ratings appear to be medium whiles 19th to 22nd and the 23rd rating suggest to be low and least respectively. Table 4.5 presents the reasons for Human and other Resource among the respondents of the company could be motivated by several reasons that affect the productivity on the construction project site, since the productivity is directly related to the human and other resources as the life wire of each project and more over it has a direct relation to the daily activities on the construction site. It is therefore realized that opportunity to undertake challenging task was rated the highest with a mean of 2.64 and SD of 0.09. the lowest is the cause of workers strike action due to delay in payment for works done, with a mean and SD of 2.62 and 1.08 respectively. With this background information the highest rated response is of much importance to be considered.

5.6.1 Opportunity to Undertake Challenging Task (Being Given Goal to work towards it through your Own Directives

Employees feel motivated when they are provided with opportunity to use their own initiative to undertake challenging tasks. When employees are given the opportunity to undertake challenging task and take responsibility for any decision made, this motivates them due to the trust management have in them. This contributes to improvement in performance. It changes their

behaviour and also encourages employees to explore and exhibit their personal skills and abilities. Some responded stated that management acknowledges the accomplishment of challenging task by assuring them of work regularly and this lead to productivity and job security. Job security affirms McClland (1988) theory which states that high achievers value money as a symbol of successful task performance since salary is not a priority to them.

Opportunity to undertake challenging task which was ranked the highest amongst most severe factor of with 2.64 from table 4.5. Ay

Nur and Serder (2006) study in drivers of productivity among construction workers in developing countries, found that undertaking challenging task can be encouraged by providing workers with greater access to key information on the structure and system of the project being undertaken and has the potential to produce rapid increase in productivity in a range of trades. In construction labour motivation for cost effective projects, it was stated that artisans will be motivated given the right conditions and opportunity (Business Roundtable, 1989). Employees are therefore sure of increasing productivity significantly when given responsibilities. Frequent interference in the activities of individual employees and gangs at the construction sites have negative effect on productivity and I t is a result of mismanagement of work sequence, unbalanced gang size, and improper work scheduling (Aynur and Serdar, 2006).

5.6.2 Recognition with Company Achievement

Identifying with company's achieved goals makes one get feed-back on performance on an assigned task. One will always feel motivated whenever recognition is directed toward him or her on the attainment of a goal. These might contribute to the choosing of identification with goal as one of the severe factors that motivate and impact on productivity positively. On the

average, artisans receive little or no recognition for their efforts but studies and extensive interview indicate that it is essential for workers to know that management formally recognise their work and particularly that management appreciate extraordinary efforts (Business Roundtable, 1989).

Non-financial recognition appears to be more effective than financial incentive for construction given the difficulties associated with financial incentives among which union objection is predominant. Among the recognition are:

- Artisan of the month award
- Outstanding gang on quality and productivity and
- Recognition of the entire project by calendars, poster, or newsletters.

Employees having the notion that identification with a goal is part of the company's policies will be motivated to achieve such goals and the recognition which goes with it. The will encouraged extra efforts to achieve subsequent productive goals and recognition.

5.6.3. Teamwork, Belongingness and Affection

Teamwork thus belongingness and affection was ranked amongst the moderately high factors affecting the employees of various companies. This is because a sense of team spirit is more conducive, motivational and productive for employees than fragmented atmosphere. Reasons for team work being the amongst several factors could be attributed to an even number of permanent, contract and casual employees of 33.33% respectively of the employee respondents. Teamwork generates friendship among workmates outside working hours. It enables work mates share ideas and find solutions to problems encountered on a task assigned should it recur.

Construction employees are interdependent in the sense that the various activities depends on the successful completion of the others. The absence of teamwork may lead to the sabotaging of works of other gangs especially contract workers who wish to complete on time. In addition, teamwork increase competitiveness by:

- Improving employee motivation and commitment,
- Improving productivity,
- Improving quality and encouraging innovation and
- Taking advantage of the opportunities provided by technologies advances (Mullins, 2005)

A research to Turkey society which is a developing country like Ghana, and has many languages, religions and ethnics groupings revealed that, well established teamwork was seen as having even greater significance to productivity (Aynur and Serdar, 2006). Due to the mobility of workers in the construction industry which can be similar in Ghana, and therefore increases productivity. Construction workers are attached to a crew or a project for a definite period and have a responsibility to work together in a shared environment and this can be achieved when employees are comfortable in their relationships with workmates and management (Aynur and Serdar, 2006).

Employees are motivated with the benefits of well-established teamwork. The flow of communication, improvement in employee confidence and trust and clarity in expressing ideas in discussions are some of the benefits of good teamwork. In addition, less skilled workers will always be motivated to learn from the skilled workers in a team within which they find themselves. Strong teamwork, in addition, contributes to the formation of unionised bodies. This

goes to affirm projects managers perception in a study of drivers of productivity among construction employees that it is an unwise strategy to attempt to establish very strong relationship among workers since such relationships strengthen the collective bargaining power when negotiating pay deals (Aynur and Serdar, 2006).

Employees also always feel motivated when superiors, colleagues and subordinates show concern and care to one another. The organizations of regular meetings to interact and identify problems of employee's makes them feel that they belong to the setup. According to Aynur and Serdar (2006), employees always rely on the company to provide opportunities for social activities after work. The most popular activities are sports and entertainment but sports is the most affordable to all construction companies. This affirms Aynur and Sedar's finding that physical activities are the most preferable among workers. This will therefore, motivate and further enhance their performance which will in effect increase productivity.

5.6.4 Strike Action Due to Delay in Payment of Works Done?

Late payment of work done that could cause a strike action was ranked the least by employee's respondent index of 1.34 and 0.614 respectively. This can be associated with the hindrance associated with the progress of work. Late of interim certificate affects cash flow of contractors which in effect influences payment to workers and suppliers of goods and services. Suppliers will therefore retain their services to be provided until a full payment is received which may result in shortage of material on site, inability to repair breakdown equipment, hence, workers will have less resources to work with compared with projected resources to be used.

From the study it is assumed that good labour-management relationships will curtain any unforeseen situations on the construction project sites.

It is therefore suggested that proper management results in less strike actions on the various construction sites.

From the above analysis and discussion strongly suggest that laws on labour –management should be enforced to maximize to provide motivation which in turn increases productivity on the site. The recommendations on how to enforce the labour Act would be discussed in the next chapter under appropriate headings.

CHAPTER SIX

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

6.1 Summary of Findings

The main purpose of this study was to assess the impact of labour-management relationships on construction sites at Tamale in Ghana. It was basically a qualitative study that employed self-administered structured questionnaire to collect primary data from a sample of 139 respondents. A response rate of 76.67% and 77.5% for employer and employees respectively was obtained for analysis. The results from the filed data were objectively analysed using SPSS 16.0 and presented in simple descriptive statistics and cross tabulation. Based on discussion of the results in the light of the research questions, the following were the major findings of this study:

- Opportunity to undertake challenging task. Employees desire to be given new opportunities to initiate activities and receive challenging task that brings the best output.
- Recognition with company achievements, everyone has the tendency of relaxing from an activity if they are not recognised at all. As Abraham Lincoln said “a nation that does not honour it’s heroes will not long endure” saying in the Ghanaian political context says “A nation that does not recognise its past and present heroes is not worth dying for”.
- Teamwork, Belongingness and affection, in actual sense team work is the backbone of every institution and as such the porous your team the weaker you are to achieve a common or corporate image

- Strike action due to delay in payment of works done? This is one of the weapons used by any aggrieved group of people or an organization.

6.2 Conclusion

Based on the above key findings, the following concussions are drawn;

- Boredom in undertaking the same work over and over; may reduce productivity due to lack of motivation. It also indicates that whenever a leader sets goals and get involved it sets good example for employees to that feel that supervisors are part of them based on the supervisor's involvement in some of the daily work schedule, they will have the motivation to work harder and this will boost their performance and hence increase productivity.
- Identifying with company's achieved goals makes one get feed-back on performance on an assigned task. One will always feel motivated whenever recognition is directed toward him or her on the attainment of a goal. These might contribute to the choosing of identification with goals as one of the severe factors that motivate and impact on productivity positively. On the average, craftsmen received little or no recognition for their efforts but studies and extensive interview indicate that it is essential for workers to know that management formally recognise their work and particularly that management appreciates extraordinary efforts (Business Roundtable, 1989). Among the recognition are: craftsman of the month award, outstanding crew on quality and productivity and Recognition of the entire project by calendars, posters, or newsletters.

- From the discussion's teamwork, belongingness and affection are more of team spirit than any other source of encouragement as a motivational tool that increases productivity on a construction sites. The reasons for teamwork amongst several factors are to generate friendship among workmates outside working hours. It enables workmates to share ideas and find solutions to problems encountered on a task assigned should it recur. Construction employees are interdependent in the sense that the various activities depends on the successful completion of the others. The absence of teamwork may lead to the sabotaging of works of other gangs especially contract worker who wish to complete on time. It is therefore to note that teamwork increases competitiveness by:
    - Improving employee motivation and commitment,
    - Improving productivity,
    - Improving quality and encouraging innovation and
    - Taking advantage of the opportunities provided by technological advancement (Mullins, 2005)
- Strike action due to delay in payment of works done? It is evident that construction employees do not enjoy embarking on strike action due to the complex nature of the work. It implies that late payment of work done that could not be a major cause for a strike but other associated hindrances affects the progress of work. From the study it is assumed that good labour-management relationships will curtail any unforeseen situations on the construction project sites. It is therefore suggested that proper management results in less strike actions on the various construction sites. From the above analysis and discussion strongly suggest that laws on labour-management should be enforced to maximize to provide motivation which in turn increase productivity on the

site. The recommendations on how to enforce the labour Act would be discussed in the next chapter under appropriate headings.

6.3 Recommendations of the Study

It is recommended that the following strategies could be implemented in order to improve upon employee motivation and its impact on productivity on construction site in Kumasi, Ghana for successful human resource management.

- Assigning Effective Duties and Targets; since it is found in this study that the highest rated labour-management relation factor is assigning duties and targets for employees to achieve, it is recommended that management should make every effort to continue to assign effective duties targets for employees to achieve. In this regard, management should involve employees in setting duties targets together for employees, thus practicing.
- Management by Objectives. Also, management should make assigned duties and targets more pragmatic and specific, while providing clear, timely and relevant instructions and guidance to employees to facilitate the achievement of the objectives. In this regard, job assignment should be clearly defined, not given arbitrary or based on guesses; it should rather be given based on the level of competence, skill, knowledge and interest of each employee. When employees are assigned to do jobs that are interesting to them and they are more competent to do, they are more likely to perform efficiently and effectively, achieve results which in turn make them happy and satisfied on the job. This is supported by the findings in this study that the highest ranked labour-management relationships

happens to be achievement of targets and goals set for employees on the construction sites.

- From the research it is recommended that Financial and Non-financial recognition or incentives should be established by various construction companies and other recognized construction agencies annually. Among the recognitions could be:
    - Artisan award of the month,
    - Outstanding gang on quality and productivity and
    - Recognition of the entire project by souvenirs, calendars, posters, magazines or newsletters.

By this employee will have the notion that identification with a goal is part of the company's policies and will be motivated them to achieve cooperate image and the recognition which goes with it.

- Due to the mobility of employees in the construction industry and therefore increases productivity, a good percentage of construction employees must be retained as a permanent that have a responsibility to work together in a shared environment and to
- Achieve goals in a reasonable period of time. There is also a flow of communication, improvement in employee confidence and trust and clarity in expressing ideas in discussions are some of the benefits of good teamwork. In addition, less skilled which they find themselves and therefore would increase productivity highly for good profit and cut down waste as well.
- It is therefore suggested that proper management will provide confidence in the employees not to embark on strike actions on the various construction sites; also, it is

strongly suggesting that laws on labour-management should be enforced to maximise and provide motivation which in turn increase productivity on the site.

6.3.1 Recommendation for Future Research

This study looked at the impact of labour-management relationships on construction sites productivity in Ghana. Similar studios could be done using a large sample size and different methodology, and compare the results in different organizational context. It is suggested that future research should be considered in the following areas or topics:

- Analysis or effective labour-management strategies across construction companies in Ghana.
- Impact of labour-management relationships on employee satisfaction o construction sites.
- Effects of remuneration on employments satisfaction in construction companies in Ghana.
- Impact of motivation on Employees and Organizational performance.

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APPENDIX A

UNIVERSITY OF EDUCATION, WINNEBA – KUMASI

COLLEGE OF TECHNOLOGY

AN EVALUATION OF THE IMPACT OF LABOUR-MANAGEMENT RELATIONSHIP ON CONSTRUCTION SITE IN GHANA

QUESTIONNAIRE

The research is being undertaken by Mr Derrick Aggrey-Anyomi, a second-year student in M. Tech Education Construction Technology. It is aim at finding the impact of Labour-Management relationship on construction site productivity in Ghana.

This is a part of the preliminary survey to provide enough information for the problem statement.

This Questionnaire is designed purely for academic work in partial fulfilment of the award of Master of Technology Degree in Construction Technology at University of Education Winneba (College of Technology) Kumasi.

Your security and anonymity is guaranteed whilst the information you provide will be used for the research work only.

For any further enquiry do not hesistate to contact the persons below:

Derrick Aggrey-Anyomi

024-2140450

Engr. Michael Korblah Tsorgali

024-4813963

Thank you for your support

SECTION A

(TO BE COMPLETED BY EMPLOYER)

BACKGROUND

1. How long has this firm been in existence?

   ☐ 0-4 ☐ 5-10 ☐ 11-20 ☐ 21 years and more

2. What is the approximate number of employee you have?

   I. Permanent ……

   II. Contract …….

   III. Casuals ……

   IV. Others (state) …….

SECTION B

(I) Preliminary view on employees and work

3. Do you set targets or assigned duties for your employees daily and weekly?

   ☐ Yes ☐ No

4. If yes, do they always meet set target at the end of every day and weekly?

   ☐ Yes ☐ No

   i. If No then what are the cause?

   …….

5. Do you have any idea about the feelings of employees at work?

   ☐ Yes they are always happy

   ☐ Not always happy

   ☐ They are not happy at all.

6. If yes, do they always give out their best at work?

   ☐ Yes ☐ No

7. If Not, always happy, do they always give out their best?

   ☐ Yes ☐ No

8. If they are not happy at all, do they always give out their best?

   ☐ Yes ☐ No

9. Have you ever experienced any form of strike action by your employees?

   ☐ Yes ☐ No

10. If yes, what were the causes?

    …….

SECTION B (II)

The following are factors that affects labour-management relationship in productivity at work. From your experience please rate the degree of effect in occurrence as well as the degree of significance or productivity on your employees.

Please tick once (√) as appropriate the following:

i) In order of effect in occurrence

ii) In order of degree of significance on productivity

- Effect :4 = Very high 3 = high 2 =medium 1 = low
- Significance: 4 =very significance 3 = significance 2 = somehow significance

  1 = not significance

Item	**Factors related to: Consultant**	**Positive Effect**				**Negative Effect**			
		4	3	2	1	4	3	2	1
1	Delay in receiving detailed set of construction drawings in bulk leading to the work done in bits or small sections by consultant								
2	Sluggish or slow response by clerk of work to inspect work								
3	Complex design to construct								

Item	Factors related to: Client	Positive Effect				Negative Effect			
		4	3	2	1	4	3	2	1
4	Delay in payment of interim certificate								
5	Unrealistic deadline for project by client or consultant								
6	Frequent changes in design and specifications results in constant interruption of work								

Item	**Factors related to: Human and other Resources Management**	**Positive Effect**				**Negative Effect**			
7	Shortage of Materials on site whiles work is in progress								
8	Workers strike due to to delay in payment of works done								
9	Health and safety plans (Availability of first aid, availability of safety wears etc)								
10	Adequate & right equipment to work with (quick replacement and repairs of broken down and old equipment)								
11	Transportation (vehicle at your disposal, allowance for transportation, transportation from a location to site and back)								
12	Salary (pay, wages, etc)								
13	Bargaining power (Negotiation for Bonus and allowances)								
14	Payment of overtime allowance (provision of extra money after normal working time)								
15	Belongingness and affection								
16	Employee training (Introductin into new ideas, further studies, workshops etc)								

17	Introduction of company policiies to new employee and orientation to old personnel								
18	Existence of labour union								
19	Promotion (elevation, eg. From carpenter to carpenter foreman)								
20	Disrespect from co-workers (Use of abusive language from colleagues, impolite speeches etc)								
21	Impartiality and Equity								
22	Good communication skills (Flow of information)								
23	Opportunity to undertake challenging task (Being given goal to work towards it through your own directives)								
24	Recognition with company achievements (Hoonour)								
25	Congestion (Overcrowding in a work area, improper site planning)								
26	Cafeteria for employee (Having a place within the premises where food are given at break for free or at a reduce price)								

27	Health services care (particular hospital to attend in case of illness or subsidising the cost of hospital bills)								
28	Accommodation (Provision of physical accommodation, package as subsidy to rent apartment)								
29	Recruitment procedures (Are you happy with the processes)								

Item	Factors related to: Management of the Project	Positive Effect				Negative Effect			
		4	3	2	1	4	3	2	1
30	Poor site layout leading to difficulty in movement								
31	Making corrections on wrong construction work done (rework order)								
32	Excessive work load on few labour force								
33	Dependency of gangs of different trade to finish before another can continue								
34	Complex design to construct								
35	Contractor staff absenteeism (Crew members not being present for work)								

36	Job security (permanent job, payment of SSNIT etc)								
37	Teamwork (Everyone contributing to the work, all hands-on deck)								
38	Worker participation I decision making (making suggestions & contribution)								
39	Work based on contract (Finish and go) instead of being employed								
40	Supervision based on leadership by example								
41	Working with unqualified persons (Working with incompetent and non-confidence workers)								

APPENDIX B

UNIVERSITY OF EDUCATION, WINNEBA – KUMASI

COLLEGE OF TECHNOLOGY

AN EVALUATION OF THE IMPACT OF LABOUR-MANAGEMENT RELATIONSHIP ON CONSTRUCTION SITE IN GHANA

QUESTIONNAIRE

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Derrick Aggrey-Anyomi
024-2140450

Engr. Michael Korblah Tsorgali
024-4813963

Thank you for your support.

SECTION A

(TO COMPLETED BY EMPLOYEES)

BACKGROUND

1. Sex: Male Female
2. Age: 15-25 26-35 36-45 56 years and above
3. What is your educational background?

- ☐ Primary education
- ☐ Middle school education
- ☐ Junior High school education
- ☐ Senior High Secondary school education
- ☐ N. V. T. I education
- ☐ CTC
- ☐ HND

Others (State)

……..

4. What position do you hold in the firm?

a. (skilled and Unskilled)

- ☐ Foreman
- ☐ Mason
- ☐ Steel bender
- ☐ Carpenter
- ☐ Plumber
- ☐ Electrician

☐ Painter

☐ Mechanic

☐ Tiler

Others (state)

……

b. For Professionals only

☐ Quantity Surveyor

☐ Project Manager

☐ Engineer

☐ Architect

Others (state)

……

5. Terms of employment

☐ Permanent

☐ Contract

☐ Casual

6. Years of experience. ☐ 0-4years ☐ 5-10years ☐ 11-20years ☐ 21-30years

☐ 31years and above

7. Years or working with the firm. ☐ 0-4years ☐ 5-10years ☐ 11-20years

   ☐ 21years and above

SECTION B

(I) Preliminary view of employees and work

8. Do you have daily assigned duties and targets to be achieved

   ☐ Yes ☐ No

9. i. If yes, do you always meet your target at the end of every day? Yes No

   ii If NO why?

   ……

   ……

   ……

10. Do you always feel happy when you are working?

    ☐ Yes I am always happy

    ☐ Not always happy

    ☐ Not at all

11. If Yes, do you always give out your best when you feel happy?

    ☐ Yes ☐ No

12. If Not, always, do you always give out your best when feel happy?

    ☐ Yes ☐ No

13. If Not at all, do you always give out your best when feel happy?

    ☐ Yes ☐ No

14. Have you ever gone on a strike? ☐ Yes ☐ No

15. If Yes, why? ……

……

SECTION B (II)

The following are factors that affects labour-management relationship in productivity at work. From your experience please rate the degree of effect in occurrence as well as the degree of significance or productivity on your employees.

Please tick once (√) as appropriate the following:

- Effect :4 = Very high 3 = high 2 =medium 1 = low
- Significance: 4 =very significance 3 = significance 2 = somehow significance 1 = not significance

Item	Factors related to: Consultant	Positive Effect				Negative Effect			
		4	3	2	1	4	3	2	1
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3	Complex design to construct								

Item	**Factors related to: Client**	**Positive Effect**				**Negative Effect**			
		4	3	2	1	4	3	2	1
4	Delay in payment of interim certificate								
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6	Frequent changes in design and specifications results in constant interruption of work								

Item	Factors related to: Human and other Resources Management	Positive Effect				Negative Effect			
7	Shortage of Materials on site whiles work is in progress								
8	Workers strike due to delay in payment of works done								
9	Health and safety plans (Availability of first aid, availability of safety wears etc)								
10	Adequate & right equipment to work with (quick replacement and repairs of broken down and old equipment)								
11	Transportation (vehicle at your disposal, allowance for transportation, transportation from a location to site and back)								
12	Salary (pay, wages, etc)								
13	Bargaining power (Negotiation for Bonus and allowances)								
14	Payment of overtime allowance (provision of extra money after normal working time)								
15	Belongingness and affection								
16	Employee training (Introduction into new ideas, further studies, workshops etc)								
17	Introduction of company policies to new employee and orientation to old personnel								
18	Existence of labour union								
19	Promotion (elevation, eg. From carpenter to carpenter foreman)								
20	Disrespect from co-workers (Use of abusive language from colleagues, impolite speeches etc)								
21	Impartiality and Equity								
22	Good communication skills (Flow of information)								
23	Opportunity to undertake challenging task (Being given goal to work towards it through your own directives)								
24	Recognition with company achievements (Honour)								

25	Congestion (Overcrowding in a work area, improper site planning)								
26	Cafeteria for employee (Having a place within the premises where food are given at break for free or at a reduced price)								
27	Health services care (particular hospital to attend in case of illness or subsidising the cost of hospital bills)								
28	Accommodation (Provision of physical accommodation, package as subsidy to rent apartment)								
29	Recruitment procedures (Are you happy with the processes)								

Item	Factors related to: Management of the Project	Positive Effect				Negative Effect			
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39	Work based on contract (Finish and go) instead of being employed								
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41	Working with unqualified persons (Working with incompetent and non-confidence workers)								