

Analyzing the Extent of Stakeholder Engagement in Defining Projects and Project Deliverables, and Major Causes of Project Misalignment in Construction Sector

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Abstract

The characteristics of the construction industry have often been observed and criticised, some even questioned whether construction is actually an industry. "Is construction an industry? Note towards a greater analytical emphasis on external linkages." Construction Management and Economics 12, 287-293), or rather a "loosely coupled system" of projects. "The construction industry as a loosely coupled system: implications for productivity and innovation." Construction Management and Economics 20, 621-631. Construction projects have been described as coalitions of firms; a 'number of independent firms coming together for the purpose of undertaking a single construction project and that coalition of firms having to work as if it were a single firm, for the purposes of the project' Winch, G.M. (1989). "The construction firm and the construction project: a transaction cost approach." Construction Management and Economics 7, 331-345. Alternatively, the parties involved in construction projects have been interpreted as organisational units joining and operating together as a single production organisation when it is advantageous; a temporary multiple organization; or a "quasi-firm" Eccles, R.G. et al (1981).

Many writers tell us why projects fail. For instance, Field tells us "Projects fail too often because the project scope was not fully appreciated and/or user needs not fully understood." Field, Tom. (1997). Hulme tells us that "MIS projects and associated procurements take place in an environment characterized by the following: Lack of management continuity and an incentive system that encourages overly optimistic estimates of the benefits that can be attained from doing the project." Hulme, Martyn R. (1997). And Leicht tells us that high user expectations can actually be the cause of project failure. Leicht, Michael. (1999) Hoffman says that projects fail because of poor alignment between IT departments and business users. Johnson, Jim, et al. (2001). And in another article Hoffman tells us that project managers too often act as "process cops and report compilers and lose sight of what they're supposed to be doing – to make sure projects are running effectively". Hoffman, Thomas July 21, 2003.

It is not uncommon to see construction projects abandoned, left uncompleted for several years, dilapidated and left to rot construction projects across the country. A careful review or study into why most of such projects are left in such states, often the intended beneficiaries complain of their objection to the location or siting of such structures and their disagreement with the government and other local council authorities. Hence this academic research into analysing the impact of project misalignment with business objectives on the overall project performance in the greater Accra construction sub-region of Ghana using the Total Quality Management (TQM) model. Since the subject of construction is broad, the focus of this research shall be on construction of housing in the Greater Accra Region of Ghana.

Keywords: Stakeholder Engagement, Defining Projects and Project Deliverables, Project Misalignment.

1.0 INTRODUCTION

Construction is a high-risk activity, which must be managed from procurement, through the design process and to the end of the construction stage. Everyone involved in a building project must appreciate their role, from client, project supervisor design process (PSDP), designer, project supervisor construction stage (PSCS), contractor and employees. The construction industry in Ghana is aware of the many challenges facing the country and the industry in particular. The industry, in collaboration with government, academia and the public sector, is working towards a process that will both meet their own business interests while simultaneously protecting the environment. The issue is less one of awareness

of the challenges than of formulating a strategy to move towards sustainability in the industry. The challenges are complex, involving a multitude of causes, impacts and diverse stakeholders, all with their own vision of what 'successful' development can and should look like. In short, the industry is searching for a vision of a sustainable future, and a process to arrive there (Ahmed et al., 2014).

The intention is to review as much as possible foundational knowledge based on research conducted by others in related fields. This article examines the relevant topics of interest to the study from existing academic sources and recognize where they fit in the entire field of study. This is in an attempt to help provide a foundation for research questions and support testing of the researcher's hypotheses using data acquired through a survey of experienced project management practitioners in the segmented area consisting of construction sector of the Ghanaian economy. Task Group 29 (1998), defined construction industry development as a deliberate and managed process to improve the capacity and effectiveness of the construction industry to meet the national economic demand for building and civil engineering products, and to support sustained national economic and social development objectives. The construction industry plays an essential role in the socio-economic development of a country. The activities of the industry have a lot of significance to the achievement of national socio-economic development goals of providing infrastructure, sanctuary and employment. It includes hospitals, schools, townships, offices, houses and other buildings; urban infrastructure (including water supply, sewerage, drainage); highways, roads, ports, railways, airports; power systems; irrigation and agriculture systems; telecommunications etc.

The construction sector holds immense potential for stimulating growth, boosting project exports and generating employment. The domestic construction sector happens to be one of the fastest growing sectors, with an impressive average growth of 7-8 percent per annum. The foundation of a higher growth rate rests on a sound and efficient infrastructural development, which makes the construction sector a key sector. The rapid expansion of infrastructure by both government and the private sector has triggered off construction activities and fueled demand in many key sectors like cement, steel, paints and chemicals, glass, timber and earth moving equipment and machinery. The construction sector is a crucial industry having strong backward and forward growth linkages. The construction industry deals with all economic activities directed to the creation, renovation, repair or extension of fixed assets in the form of buildings, land improvements of an engineering nature. Besides, the construction industry generates substantial employment and provides a growth impetus to other sectors through backward and forward linkages (Osei, 2013). The main purpose of this study is to analyse the impact of project misalignment with business objectives on the overall project performance in the Greater Accra construction sub-region of Ghana using TQM model.

2.0 BACKGROUND OF STUDY

Enterprise Resource Planning (ERP) systems are off-the-shelf software products used to enhance the efficiencies of companies' financial and human capital, as well as their material and operational activities. A literature on ERP project management by Aloini et al (2007) links project success to cost objective, time objective and quality of the product objective. The literature referred to time objective as the amount of time available to complete a project whiles the cost objective highlighted the resources available for the project including budget, the project team members and so on. The product objective refers to what must be done to produce the project's end-result. Since ERP systems offer pre-defined solution, it has to be customized to fulfil the requirements of the company and the objective of the customization is reached when a consistent alignment between the implemented solution and the company's needs is attained. According to Genoulaz et al (2006), the alignment between the deployed ERP system and the company is one of the critical issues that determine the success of an ERP. Decision making tools remain crucial for project managers in order to master alignment and to act before misalignment occurs.

A project risk according to Project Management Institute (PMI, 2008) is the probability of the occurrence of an event that has negative effects on the objectives of the project. Project misalignment risk on the other hand is the risk that the main requirements of the company are not satisfied by the implemented ERP system and/or the company's business processes are badly supported by the customized system. ERP systems offer a generic solution, which has to be aligned to the specific

requirements of a company hence an effective management of the project misalignment risk in the early stages of the ERP project life cycle is necessary to ensure a consistent fit between the system and the company's requirements.

2.1 Project Performance

The construction industry is complex in its nature because it comprises large numbers of parties as owners (clients), contractors, consultants, stakeholders, and regulators. Despite the complexity, the industry plays a major role in the development of societies. According to Navon (2005), the construction industry contributes to about 10% to gross national product in industrialized countries. However, many local construction projects report poor performance due to unavailability of materials, excessive amendment of drawings, poor coordination among participants, ineffective monitoring, and lack of project leadership skills (UNRWA, 2006). The measurement of performance in the construction industry has been the subject of considerable research for decades with the development of wide variety of innovative management principles, approaches, and techniques such as continuous improvement, quality management concept, and quality assurance standards that has resulted in marginal improvements in construction (Akkoyun and Dikbas, 2008).

Project performance can be measured and evaluated using several performance indicators that could be related to various groups or dimensions such as time, cost, quality, client satisfaction, client, client changes, business performance, health and safety (Cheung et al. 2004). Among the indicators, time, cost and quality are the predominant performance evaluation dimensions. Generally, performance dimensions may have one or more indicators, and could be influenced by various project characteristics. For example, Dissanayaka and Kumaraswamy (1999) found that project time and cost performances are influenced by project characteristics, procurement system, project team performance, client representation's characteristics, contractor characteristics, design team characteristics, and external conditions.

Similarly, Iyer and Jha (2005) identified many factors as having influence on project cost performance; these include project manager's competence, top management support, project manager's coordinating and leadership skills, monitoring and feedback by the participants, decision-making, and coordination among project participants, owners' competence, social condition, economic condition, and climatic condition. Although the three measures (time, cost and quality) provide an indication of the success or failure of a project, they do not separately provide a balanced view of the project's performance, and their implementation in construction projects is apparent only at the end of the project.

2.2 Project Contract Tendering

Building projects are getting more complex and as a result, the contractors who build these projects have to meet specific demands. Nowadays, the most important criterion for tendering in the construction industry is price. This means that the contractor who offers the lowest price gets the work. In a survey conducted by the Dutch Government in 2003, the disadvantages of this way of tendering on the criterion of lowest price does not stimulate and supplement the quality of the work and innovation in the building industry. In addition, because of the lowest price tendering, all contractors have to do exactly the same thing. Because of this, there are hardly any contractors with a particular expertise. This is very bad for innovation in the industry. This way of tendering also leads to highly divided responsibilities and in many cases bad relationships between contractor and client. These bad relationships are a result of the fact that contractors try to come up with the lowest possible price. When they have the lowest price in the tender, they are allowed to build the project.

During the project, the contractor tries to earn as much extra money as possible. When, for example, the client wants to make a little change in the design, the contractor will ask a lot of money for that. Most of the time he will ask for more money than he really needs to fulfil that job. One of the most important steps in every production process is the selection of a supplier. In the construction industry, very difficult, unique products have to be developed. In the construction industry, one of the suppliers is the contractor. He is responsible for the execution of the work.

Although there are many differences between the construction industry and other industries, the principle of selecting suppliers is the same: a client buys a product from a supplier. The whole process of supplier selection has been discussed in literature for several years. Van Weele (2010) has developed a purchasing model that includes the following steps: Determining specification, selecting supplier, Contracting, Ordering, Expediting and evaluation, Follow-up and evaluation. Another model for contractor selection is developed by Momme and Hvolby (2002) and is called the outsourcing framework, which contains the following steps: Competence analysis, Assessment and approval, Contract negotiation, Project execution and transfer, Managing relationship, and Contract termination.

3.0 LITERATURE REVIEW

The construction industry plays an essential role in the socio-economic development of a country. The activities of the industry have a lot of significance to the achievement of national socio-economic development goals of providing infrastructure, sanctuary and employment. It includes hospitals, schools, townships, offices, houses and other buildings; urban infrastructure (including water supply, sewerage, drainage); highways, roads, ports, railways, airports; power systems; irrigation and agriculture systems; telecommunications etc. The construction sector holds immense potential for stimulating growth, boosting project exports and generating employment. The domestic construction sector happens to be one of the fastest growing sectors, with an impressive average growth of 7-8 per cent per annum. The foundation of a higher growth rate rests on a sound and efficient infrastructural development which makes the construction sector a key sector.

The rapid expansion of infrastructure by both government and the private sector has triggered off construction activities and fuelled demand in many key sectors like cement, steel, paints and chemicals, glass, timber and earth moving equipment and machinery. The construction sector is a crucial industry having strong backward and forward growth linkages. It deals with all economic activities directed to the creation, renovation, repair or extension of fixed assets in the form of buildings, land improvements of an engineering nature. Besides, the construction industry generates substantial employment and provides a growth impetus to other sectors through backward and forward linkages.

The main purpose of this study is to assess the economic contribution of the construction industry in Ghana and to throw light on the emerging opportunities and challenges. Construction in any country is a complex sector of the economy, which involves a broad range of stakeholders and has wide ranging linkages with other areas of activity such as manufacturing and the use of materials, energy, finance, labor and equipment (Hillebrandt, 1985). The contribution of construction industry in the aggregate economy of a country has been addressed by a number of researchers and valuable literature available on the linkage between construction sector and other sectors of the economy.

Several researchers conclude that the construction sector has strong linkages with other sectors of the national economy. Hirschman (1958) first defined the concept of 'linkage' in his work on "Strategy of Economic Development". He emphasized the significance of 'unbalanced' growth among supporting sectors of the economy as opposed to a balanced development of all interrelated economic activities (Lean, 2001). Park (1989) has confirmed that the construction industry generates one of the highest multiplier effects through its extensive backward and forward linkages with other sectors of the economy. It is stated that the importance of the construction industry stems from its strong linkages with other sectors of the economy (World Bank, 1984).

However, interdependence between the construction sector and other economic sectors is not static (Bon, 1988; Bon, 1992). Strout (1958) provided a comparative inter-sectoral analysis of employment effects with an emphasis on the construction. Ball (1981) and Ball (1996 and 1995) addressed the employment effects of the construction sector as a whole. Many studies (Fox, 1976; Bon and Pietroforte, 1993) use the strong direct and total linkage indicator to explain the leading role of the construction sector in the national economy. Field and Ofori (1988) stated that construction makes a noticeable contribution to the economic output of a country; it generates employment and incomes for the people and therefore the effects of changes in the construction industry on the economy occur at all levels and in virtually all aspects of life (Chen, 1998; Rameezdeen, 2006). This implies that construction has a strong linkage with many economic activities (Bon, 1988; Bon and Pietroforte, 1993; Bon et al., 1999; Lean, 2001; Rameezdeen,

2006), and whatever happens to the industry will directly and indirectly influence other industries and ultimately, the wealth of a country.

Hence, the construction industry is regarded as an essential and highly visible contributor to the process of growth (Field and Ofori, 1988). The significant role of the construction industry in the national economy has been highlighted by Turin (1969). On the basis of cross section of data from a large number of countries at various levels of development, Turin (1969) argued that there is a positive relationship between construction output and economic growth. Furthermore, as economies grow construction output grows at a faster rate, assuming a higher proportion of GDP (Turin, 1969, Hua, 1995, Wells, 1986). In a recent article Drewer (1997) returns to the 'construction and development' debate. Using data for 1990 similar to that assembled by Turin for 1970, he shows that global construction output has become increasingly concentrated in the developed market economies. He goes on to argue that this new evidence does not support Turin's propositions (Drewer, 1997, Wells, 1986).

The construction industry has made significant contribution to both industrial output and overall, Gross Domestic Product (GDP) in Ghana over the years. With reference to available country-wide statistics, the impact of the built environment sector as a whole is much greater; including segments of the manufacturing, mining, quarrying, electricity and water sectors. From observations and reference to legal and regulatory documents such as the Building Regulations (ROG 1996), it suggests that the Ghanaian built environment sector is modeled on the UK regulatory system. The Ghanaian construction sector is akin to the UK construction sector about 20 years ago. There are serious shortfalls in materials handling, safe working practices, quality and timeliness of construction. Another widely applicable feature of the Ghanaian built environment sector, common to many developing countries, is that labour is comparatively cheap. This means that greater emphasis is put on selection of materials and components by price rather than might be expected in countries where there is a higher labour cost.

The key players involved in the Sector are:

- The Client Community – both public and private sectors.
- The Design Community
- The Supply Chain – Materials Suppliers, Machinery Manufacturers, Sub-assemblers.
- Main Contractors and Sub-Contractors of every tier.
- Universities and technological institutions and Professional associations.
- Economic drivers such as Banks and other financial corporations
- Trade Unions, including regulation and standards authorities.

3.1 Coverage of Construction

Construction in any country is a complex sector of the economy, which involves a broad range of stakeholders and has wide-ranging linkages with other areas of activity such as manufacturing and the use of materials, energy, finance, labour and equipment (Hillebrandt, 1985). The contribution of construction industry in the aggregate economy of a country has been addressed by a number of researchers and valuable literature available on the linkage between construction sector and other sectors of the economy. Several researchers conclude that the construction sector has strong linkages with other sectors of the national economy.

Hirschman (1958) first defined the concept of 'linkage' in his work on "Strategy of Economic Development". He emphasized the significance of 'unbalanced' growth among supporting sectors of the economy as opposed to a balanced development of all interrelated economic activities (Lean, 2001). Park (1989) has confirmed that the construction industry generates one of the highest multiplier effects through its extensive backward and forward linkages with other sectors of the economy. It is stated that the importance of the construction industry stems from its strong linkages with other sectors of the economy (World Bank, 1984). However, interdependence between the construction sector and other economic sectors is not static (Bon, 1988; Bon, 1992). Strout (1958) provided a comparative inter-sectoral analysis of employment effects with an emphasis on the construction. Ball (1981) and Ball (1996 and 1995) addressed the employment effects of the construction sector as a whole. Many studies (Fox, 1976; Bon and Pietroforte, 1993) use the strong direct and total linkage indicator to explain the leading role of the construction sector in the national economy.

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3.2 The Country Ghana and Construction

As a developing country located in West Africa, with a land area of 238,537 square kilometres, and a population of over 27 million people, Ghana has great potential in the construction sector. Ghana through seeking to be the gateway to West Africa and the champion of African excellence, its construction industry has been growing steadily over the years. Given the Ghanaian Government's objective in the Ghana Poverty Reduction Strategy (GPRS II) to promote urban infrastructure development and the provision of basic services including increased access to safe, decent and affordable shelter has given the industry a further boost.

According to the World Bank (2003) report, the annual value of public procurement for goods, works and consultant services represents about 10 per cent of Ghana's gross domestic product (GDP). According to Ayirebi-Dansoh (2005), in Ghana, the operating environment for construction firms is constantly changing in the face of a volatile economic environment, shifting political climate and a highly competitive market. Despite the turbulent environment in which the industry operates, other studies have linked the relationship between the construction industry and the nation economy (Rameezdeen and Ramachandra, 2008). The construction industry according to Ayirebi-Dansoh (2005) is linked directly to the Ghanaian economy since the government is the biggest client in the industry. As a result, successive governments have been channeling many funds into the construction industry.

International donor agencies have also been helping through provision of funding. The construction industry in Ghana, as in other parts of the world, is huge and a crucial segment in economic development. No matter what one does, there is construction, as it cuts across all sectors. Being among the top drivers of the Ghanaian economy, including agriculture, manufacturing and mining, its importance cannot be over-emphasized, especially as the country is one of the most active economically in West Africa. The construction industry adds to growth as it employs both skilled and unskilled labour, from engineers and consultants to artisans and labourers. Construction and maintenance of buildings, housing, roads, bridges and other physical infrastructure are crucial to generate employment, development and growth. In Ghana, local contractors are ill-equipped, lack the necessary qualifications and finances and have been beaten by foreign contractors who have won the major construction works such as roads, bridges, and other infrastructure.

From a low point in the 1970s and 1980s, the share of construction in the GDP has moved up from 4.5% in 1975 to 8.5% by the turn of the century and has been doing about the same levels since. The sector grew by 10% in 2008 but registered a negative growth rate of 1% in 2009 due to the global economic recession. Most of the challenges faced by the poor in the country is associated with housing. This is because the housing environment represents an everyday-landscape, which can either support or limit the physical, mental, and social well-being of the residents (Bonnefoy 2007; Songsore and McGranahan 1993). The view, according to Newman (2008) is that adequate housing gives socio-economic benefits to both the occupants and the larger society (Newman 2008).

Rapid increase in population in Ghana has resulted in a large housing deficit, especially in urban areas. It is estimated that the country needs at least 100,000 housing units annually while supply is estimated at 35 percent of the total need. Other studies put the country's overall annual deficits between 70,000 and 120,000 housing units with only 30-35 percent of the annual estimated requirement being supplied (ISSER 2013). While there may be disagreements as to the estimate of the annual requirement, there is a consensus of a shortfall in the supply of housing, particularly in urban Ghana.

3.3 Project Management and Related Knowledge Areas

A project, according to Newton (2015) is a temporary endeavour designed to produce a unique product, service or result with a defined beginning and end (usually time-constrained, and often constrained by funding or deliverables), undertaken to meet unique goals and objectives, typically to bring about beneficial change or added value. There are some characteristics that are peculiar to most projects: they have a specific start and endpoint, and once that endpoint is reached, the project is over. All projects are unique in the sense that there may not be a pre-existing blueprint for the projects execution or the need to repeat the project once it is completed.

The goal characteristic of a project may be well perceive as achieving stated objectives or solve a specific problem, while its temporary nature signifies a discreet, definable commencement and conclusion (Olateju et al, 2011). Project management on the other hand is regarded as a system or process of planning, designing, scheduling, managing and controlling interconnected project activities in order to achieve specific objectives or goal within a specific time, budget and standards (Lewis, 2007). Abbasi and Al-Mharmah (2000) defined project management as the art and science of planning, designing and managing work throughout all the phases of the project life cycle. The primary challenge of project management according to Newton (2015) is to achieve all of the project goals and objectives while keeping in mind the constraints on scope, time, quality and cost.

3.4 Focus on Stakeholder Analysis

Project management helps an organization to invest their limited or scarce resources in the most efficient way in order to achieve recurring success and meeting the expectations of stakeholders. "Stakeholders are those persons or organizations whose views, interests, and/or requirements can impact on, or are impacted by, the initiation and/or formulation and eventual implementation of the project solution" (Kagioglou et al, 1998). In the construction industry, stakeholders are numerous and can include both "traditional" and emerging stakeholders (Elkington, 1997). These stakeholders may include the client and shareholders, financiers, insurers, consultants, contractors, sub-contractors and suppliers, various levels of government policy makers and regulators and the end-users.

The emerging stakeholders according to Sidwell et al, (2001) include special interest groups, employees and unions, competitors and the end-users' customers. Governments and other institutions usually undertake different projects with the goal of creating new service or improving the technical efficiency of an existing project (Olateju et al, 2011). According to the Association of Project Management (APM, 2013), a project is deemed successful when it meets the expectations of its stakeholders. The industry's customers and stakeholders seek timely and efficient completion of building and construction projects, preferably in a non-confrontational environment, and the outcomes depend largely on the cooperative attitudes of the parties involved (Sidwell et al, 2001).

3.5 Project Misalignment

A typical construction project brings together individuals representing a wide variety of functional groups with diverse priorities, expectations and requirements. According to Eggleton (2001), the 'business as usual' attitudes of clients and contractors is project misalignment. A project misalignment is occurring when the real requirements of the company are not satisfied or when the company's business processes are badly supported by the customized system (Mamoghil et al, 2011). The requirements of a company are associated with business processes to be put under control, and take place at three different levels including organizational level, informational level and functional level. The objectives of an organization

are not satisfied when: (1) the implemented business processes do not correspond to the wished one, either for the sequencing of the activities or about people who are involved in the activities (organizational and functional levels), and also at the level of data used or impacted by the processes (informational level). (2) the degree of integration, that is how the processes have been put under control, is not reached. Project misalignment also occurs when a company fails in expressing its accurate requirements (Mamoghil et al, 2011). A project misalignment if not effectively managed can affect the company's performance and even leads to its bankruptcy. In a report by Davenport (1998), some well-known companies went bankrupt and the problem was associated with bad management of the project alignment.

3.6 Construction Project Performance Measurement

Throughout the last two decades a number of industries, primarily manufacturing, have introduced new methods and techniques to shift traditional paradigms in order to improve their performance. This has led to the creation of new philosophies such as concurrent engineering/construction, lean production/construction and many others such as JIT, TQM, TPM etc. The main driver behind those philosophies is to optimize an organisation's performance both internally and externally within its respective marketplace. Inevitably, this has led to the 'rethinking' of performance management systems through effective performance measurement.

Bititci *et al.* (1997) explain the distinction between performance management and measurement in that the first "... is seen as a closed loop control system which deploys policy and strategy, and obtains feedback from various levels in order to manage the performance of the system" whereas the performance measurement system "... is the information system which is at the heart of the performance management process and it is of critical importance to the effective and efficient functioning of the performance management system."

Therefore, performance measurement is the process of "... determining how successful organisations or individuals have been in attaining their objectives [and strategies]" (Evangelidis 1992). To achieve this, the outputs of organisational strategic and operational processes are measured, in a quantifiable form, to monitor the vital signs of an organisation (Hronec 1993; Euske 1984). This paper examines the elements of the process as illustrated in fig.1 providing a critical review of the literature in order to develop the Performance Process conceptual Framework (PPF) for predominantly the construction industry.

The importance of identifying an organisation's performance is evident throughout the world-wide markets, the results of which are to attract future investment, increase share value and attract high calibre employees. Therefore, it is important to consider how an organisation's performance is measured and how it can be communicated to the wider market i.e. how can it be understood and interpreted by the potential investors, employees and customers. The basis of formulating performance indicators that achieve the latter have been in operation as early as the beginning of our century (Chandler 1997). Those performance indicators have traditionally concentrated on finances e.g. return on investment, sales per employee, profit per unit production, which as Sanger (1998) suggests "...financial measures are useful - but they tend to measure the past - and they tend to measure the easily-measurable." The apparent inadequacy of financial measures for contemporary businesses has been identified by a number of authors, for example Johnson (1994), Crawford & Fox (1990), Hayes et al (1988), Johnson and Kaplan (1987) to mention but few. Neely (1999) identified that the reasons why these types of measures are criticised is because they:

- Encourage short-termism
- Lack strategic focus and fail to provide data on quality, responsiveness and flexibility
- Encourage local optimization
- Do not encourage continuous improvement

The main reason for the above failings of financial measures is they are 'lagging metrics' (Ghalayini & Noble 1996) in that they report on results and decisions made in the past and therefore of little use in improving current performance. In effect, they are reporting on the organisation's past performance rather its current performance. A simplistic analogy to illustrate this point can be drawn from the field of sports, and in particular football, where knowing the result of a match offers you an

indication of how the team performed but it does little to suggest future improvements, identify mistakes and wrong strategies, assess individual performance or identify weaknesses. In any case the match was either lost or won. Similarly, organisations that rely on financial measures alone can identify their past performance but not what contributed to achieve that performance. Therefore, in addition to measuring 'what' the performance of an organisation was, the 'how' that performance was achieved should also be identified on an on-going basis. It is only by understanding how the organisation arrives to a particular performance, and designing metrics (leading as opposed to lagging) to measure the 'how' that an organisation might start to improve and increase market share. This has been the focus of research since the late 80's when increased globalised competition has forced companies to consider nontraditional measures (Ghalayini & Noble (1996) provide an interesting comparison of traditional and non-traditional measures). As a result of this a new field of study has emerged which aims to identify the right number and type of performance metrics, in an integrated, to the organisation, manner. One of the tools created to do that is the balanced scorecard.

4.0 RESEARCH METHODOLOGY

The aim of this research is to analyze the impact of project misalignment with business objectives on the overall project performance in the Greater Accra construction sub-region of Ghana using the TQM Model. The focus is to delve into the causes of project misalignment, impact on project objectives and performance in the Ghanaian construction industry. This chapter highlights the methodology, which comprises the research design, ethical considerations, and research methods involving samples, results, questionnaires and interviews.

4.1 Research Design

A research design is the arrangement of conditions for data collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure or simply put, the research design is the conceptual framework within which the research is conducted (Selltiz et al. 1959 cited by Kothari 2004). Research design refers to the conceptual framework within which the research is conducted. According to Saunders et al, (2008) there are three main types of research design; exploratory, explanatory and descriptive. The research designs differ in several ways especially how the research questions are formulated and the manner in which data is collected. An exploratory research design tries to find out what is happening, seeking new insights, asking questions and to assess phenomena in a new light (Robson, 2002). According to Saunders et al, the major emphasis of exploratory research is on the discovery of ideas and insights. The exploratory research could be conducted through a number of techniques including literature review, interviews, focus groups and case studies.

Descriptive research seeks to portray an accurate profile of persons, events or situations (Robson, 2002). This type of research is concerned with describing the characteristics of a particular individual, or of a group and is often used when a problem is well structured. Explanatory research design seeks to establish the causal relationships between variables. The approach used in explanatory research is to study a situation or problem in order to determine the cause-and-effect relationship among the variables (Saunders et al. 2009). In the context of this study where the researcher tries to find out the causes of project misalignment, describing the nature of construction in Ghana, and also finding out the existence of construction industry in the Greater Accra Region of Ghana, both exploratory and descriptive research design is used.

4.2 Ethical Considerations

Ethical consideration in research is critical because it prevents fabricating of data and therefore promotes the quest for knowledge, which is the major goal of research. Ethics are norms or standards for conduct that determines the difference between acceptable and unacceptable behaviors. The research was well planned so that the chances of misleading results are minimized and meet ethical acceptability. The research is conducted with honesty such that works cited from other sources were duly referenced. In addition, all participants involved in the study were fully informed on the objectives of the study and assured of full confidentiality. All respondents were asked to sign a consent form before being interviewed or given questionnaires. The consent form outlined the title and general nature of the study,

assurance of confidentiality, the option to decline participation and that the results of the study will be made available to them should they wish to receive them. Briefly, the study was conducted with voluntary participation and informed consent of the respondents. The research considered these two main aspects of ethics;

- The individual values of the researcher relating to honesty, frankness and personal integrity.
- The researcher's treatment of other people involved in the study, relating to informed consent, confidentiality, anonymity and courtesy.

4.3 Research Methods

The research methods used in this research covers samples, results, questionnaires and interviews conducted collect information from the participants.

4.3.1 Samples

The study adopted a purposive sampling technique, to reach out to the respondents in the Greater Accra region who are involved in the construction of housing. In the case of this study, the respondents are the various stakeholders in the construction of housing in the Greater Accra Region. The study employed a sample size determination equation adopted by Slovin (1960) which gives an idea of how large a sample size needs to be to ensure a reasonable accuracy of results. The formula is given below.

$$n = \frac{N}{1 + Ne^2}$$

Where n = the sample size, N = the sample frame and e = margin of error of 5% (95% confidence interval). According to Oxford Business Group 2014, there are more than 1600 building contractors in Ghana. According to Slovin's formula, about 320 samples should be taken if the study is conducted nationwide (all ten regions). Since the research is centred on the construction of housing in the Greater Accra Region of Ghana, 120 respondents/stakeholders were sampled.

The stakeholders who sampled include clients, professional consultants and contractors who directly or indirectly undertake construction of housing in the Greater Accra Region. The clients are made up of Government, real estate developers, investors and other building owners. The government being the major client is represented by the Ministry of Road and Transports, Ministry of Water Resources, Works and Housing in giving out projects in Ghana (Gyadu-Asiedu, 2009).

The professional consultants include architects, quantity surveyors, geodetic engineers, structural engineers, electrical engineers and service engineers. Professional institutions such as Ghana Institution of Architects, Ghana Institution of Surveyors, and Ghana Institution of Engineers etc. regulate this group of stakeholders. The other group of stakeholders; contractors provide services such building of roads, housing, bridges, electrical works, plumbing works, and general building works.

4.3.2 Results

The researcher distributed 120 questionnaires to participants out of which 98 were completed and returned, giving a response rate of 81.7%. The researcher used descriptive statistics in the analysis of the questionnaire and the results displayed in frequency tables. The table highlights frequency, percentages, mean and standard deviation of the variables.

Description	Variable	No. of Respondents	Percentage (%)
Gender	Male	90	91.8
	Female	8	8.2
	Total	98	100.0
Age Category	Under 30 years	19	19.4
	30-39 years	24	24.5
	40-49 years	36	36.7
	Above 50 years	19	19.4

	Total	98	100.0
Educational Background	Construction Technician Certificate	41	41.8
	Higher National Diploma	27	27.6
	Undergraduate Degree	23	23.5
	Postgraduate Degree	7	7.1
	Total	98	100.0
Organizational Status	Project manager	35	35.7
	Civil engineer	23	23.5
	Quantity surveyor	19	19.4
	Supervisor	21	21.4
	Total	98	100.0
Years of Experience	Below 10 years	50	51.0
	10-19 years	18	18.4
	20-29 years	22	22.4
	Above 30 years	8	8.2
	Total	98	100.0

4.3.3 Questionnaires

The researcher developed the questionnaire based on the research questions. Initially, a pilot questionnaire was drafted and tested to ensure that the questions are clear and concise in order to have consistent answers that will satisfy the research objectives. The questionnaire is designed to collect data on respondents who are linked to construction in the Greater Accra region. The questionnaire has close-ended questions that requires the respondents to tick applicable boxes. In addition, there are open-ended questions that allows the respondents to express personal views to their satisfaction. The questionnaire is divided into two sections, A and B. The section A requested the background information of the respondents. The background information include gender, age, level of education, position held, type of construction work undertaken by the company and the years of construction experience of the respondents.

The Section B covers three major topics; project misalignment, nature of construction in Ghana and Total Quality Management. The researcher sought the opinion of respondents on Total Quality Management using a five-point Likert scale where 1 = strongly disagree, 2=disagree, 3=neutral, 4= agree, and 5=strongly agree. The study also attempted to determine the level of Total Quality Management implementation in the construction subsector of Ghana. As a result, the questionnaire asked the participants the degree or extent to which their company practice Total Quality Management principles as follows; 1 =very low, 2= low, 3=moderate, 4=high and 5=very high. The researcher administered the structured questionnaires to construction companies who were in turn requested to deliver them to their qualified site managers. To ensure conformity, the participants were given ample time to respond to the questionnaires.

4.3.4 Interviews

The researcher conducted interviews to many stakeholders in the construction sub-sector. The interviewees were allowed to fix meeting dates according to their schedule. The participants were given ample time to respond to questions. The questions asked during the interview revolved around both the primary and secondary objectives of the study. The interview was conducted on participants who are known to have knowledge and necessary interest in the study area and play key roles in the construction sub-sector of Ghana. Some of the questions centers on how they measure performance of projects, strategies used to ensure alignment between project management and business objectives, concept of project misalignment, application of TQM models in the construction sub-sector.

4.4 Validity

The researcher conducted a Cronbach's analysis on the "factors affecting project misalignment" subscale of the study. This analysis checks the reliability of the data. It was found that the overall value of Cronbach's alpha for the variables was 0.813, which indicates that the subscale has an adequate level of inter-item reliability. According to Hair et al. (1998), the Cronbach's alpha values in the Table 4.1 below reveals that the measurement used exceeded the cut-off threshold of 0.7.

Table 4.1: Reliability Analysis

Variable	Cronbach's Alpha if Item Deleted
Lack of communication	0.839
Poor collaboration	0.834
Lack of shared domain knowledge	0.764
Lack of accountability	0.745
Conflicting personalities	0.720
Process non-compliance	0.741

The researcher ensured that the content of validity was guaranteed by reviewing the questionnaire and interview guide to make sure they address the research questions. In addition, the validity of the data was enhanced by collecting data from appropriate participants who are involved in construction projects in the Greater Accra Region.

This chapter presented the methodology adopted to address the research objectives. The specific topics addressed in the chapter include; the aim, research design, ethical considerations, research methods. The research methods presented covered the sample of data used for the analysis, results of the result, details of the questionnaires and interviews, and the validity of the data collected.

5.0 DATA AND RESULTS ANALYSIS

The type of data used in this research is both primary and secondary data. The primary data was sourced from participants who belong to the construction sub-sector of the Greater Accra Region. Both structured questionnaires and interview guides were used in the collection of the primary data. The nature of the information received from the participants is qualitative and it includes background information such as gender, age, level of education, type of construction work undertaken, years of construction experience etc. In addition, other information such as participants understanding of project misalignment, opinion on the factors of project misalignment in the construction sector, type of quality improvement program adopted by their organizations, the level of implementation of Total Quality Management in the Ghanaian construction subsector. The secondary data collected pertains to the total number of construction firms in the country, which was used in the determination of sample size for data collection.

The data collected was reviewed and uncompleted questionnaires discarded. The completed questionnaires were coded and the responses entered into SPSS, the Statistical Package for Social Sciences (version 23). The data on factors affecting project misalignment and participants' opinion on Total Quality Management were coded on a Likert scale where 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, and 5 = strongly agree. However, the data on the level of implementation of TQM in the Ghanaian construction industry is coded as 1 = very low, 2 = low, 3 = moderate, 4 = high, and 5 = very high.

The raw data was collected using structured questionnaires distributed in person, email and an online medium called "survey monkey". Since the focus of the research is on the construction of housing in the Greater Accra Region, the areas selected are on record to have major construction projects in the region. According to the population and housing census from the Ghana Statistical Service (2010), the selected districts have the highest percent of houses with the Accra Metropolis alone contributing 35.6% of houses in the region which is evident of its urban status. The researcher received the highest number of responses from participants in the Accra Metropolis where the major construction works are undertaken in the region.

Table 4.2: Distribution Pattern among Target Population

Districts	Number of Responses
Accra Metropolis	48

Ga South	10
Ga West	10
Ga East	10
Tema Metropolis	20

The questionnaires were distributed via email and survey monkey to the areas where the researcher could not go because of time constraints. The researcher gave participants ample time to respond to the questionnaires and their feedback analyzed for completeness and coherence. The questionnaire captured the demographic characteristics of the respondents in the Section A. The demographic characteristics provided descriptive information on gender, age, level of education, experience, and position held. This information is relevant because it helps to ascertain the validity of the results obtained and to develop an understanding of the background of participants with respect to their educational level and years of experience.

The results revealed that the majority of the participants representing 91.8% of the respondents are male while 8.2% are female. The implication is that males dominate the construction sector in Ghana, since it involves rigorous or physical activities. The research captured participants with different age categories as their age contributes to their level of experience in the construction industry. Majority of the participants representing 36.7% belongs to 40-49 years age group. In addition, the results revealed that 24.5% of the respondents belong to 30-39-year group and 19.4% of the participants are either below 30 years or above 50 years. The researcher found out that the participants have at least construction technician certificate since the construction sector is a technical field that requires participants to have some form of practical training.

The research shows that 41.8% of the participants have construction technician certificate and 7.1% have postgraduate degree. Also, 27.6% and 23.5% of the participants have diploma and undergraduate degrees respectively. The participants involved in the study are project managers (35.7%), civil engineers (23.5%), quantity surveyors (19.4%) and supervisors (21.4%). The research revealed that 8.2% of respondents have more than 30 years construction experience whilst half of the respondents have less than 10 years working experience in the construction sector. In addition, 18.4% and 22.4% of the participants have 10-19 years and 20-29 years construction experience respectively.

5.1 Causes of Project Misalignment

Table 4.3: Factors Influencing Project Misalignment

Factors	N	Mean	Std. Deviation	Rank
Lack of communication	98	4.32	0.467	1 st
Poor collaboration	98	4.16	0.372	2 nd
Process non-compliance	98	3.46	0.802	3 rd
Conflicting personalities	98	3.42	1.192	4 th
Lack of accountability	98	2.65	1.393	5 th
Lack of shared domain knowledge	98	2.63	1.143	6 th

One of the objectives of the researcher is to delve into the causes of project misalignment. To achieve this aim, the respondents indicated their level of agreement with certain factors from literature identified to influence misalignment in construction projects. These factors include; lack of communication, poor collaboration, lack of shared domain knowledge, lack of accountability, conflicting personalities and process non-compliance. These factors were rated on a five-point Likert scale where 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree and 5 = strongly agree. The responses from the 98 participants are displayed in the Table 4.3 above.

The result shows the ranking of the responses from the 98 participants of the study. The three most ranked factors perceived to influence misalignment of projects in Ghana are lack of communication between the various stakeholders, poor collaboration and process non-compliance. In order to minimize misalignment in construction projects in the Ghana, more emphasis should be laid on how project objectives are communicated to all the individuals involved. The issue of lack of collaboration in Ghana

occurs when especially government projects are given out to contractors and there is little or collaboration between the two parties to ensure that the project has been completed in time. According to the participants, this has resulted in several unfinished projects that have been given out to private contractors by government. Interestingly, the third highest ranked factor perceived to influence project misalignment by the respondents is process non-compliance. In a paper written by Kohlbacher & Gruenwald (2011), the authors measured the performance of organizations by considering various dimensions that shape process orientation in those organizations. The authors highlighted some elements that influence process non-compliance and how they affect the performance of projects.

5.2 The Nature of Construction in the Greater Accra Region

The construction sector in Ghana is a vibrant and growing industry, which provides a significant contribution to Gross Domestic Product of the country. According to a provisional 2017 annual Gross Domestic Product report by the Ghana Statistical Service (2018), construction contributes 13.7% to GDP. The industry dominated with physical infrastructure includes a range of stakeholders who contribute to the social development of the country. The key stakeholders of the construction sector in Ghana are clients, professional consultants and contractors. Among the clients, the government is the major actor involved in the construction sector.

The Ministry of Water Resources, Works and Housing which is responsible for housing infrastructure, represents the government as a client. The other client that represents government is the Ministry of Roads and Highways, which, is in charge of overseeing civil infrastructure projects. According to the interviewees, the construction sector in the Greater Accra Region is characterized by shoddy work by some contractors, lack of capacity of local contractors to deliver big projects and quality, unwillingness of banks to advance credits due to high levels of unpaid debts and unfavorable competition from foreign players. In addition, the interviews revealed that even though numerous building construction projects have constantly been carried out in the region, there is still a huge housing deficit to meet the increasing demand for housing in the Accra Metropolis.

5.3 Stakeholder Engagement in Construction Projects

The interviewees have addressed the level of stakeholder involvement in the construction sector, highlighting challenges faced by these actors in delivering projects. The survey found out that even though the industry is dominated with professionals with years of practical experience, there is no regulatory body dedicated to ensuring stakeholder safety and increasing professionalism in the industry. Since there is no regulatory framework to oversee the collaboration of the various stakeholders in tendering for projects, it is very difficult to measure the extent engagement of all actors involved in construction projects in the country. The government in an attempt to address this challenge, outlined frameworks for articulating the roles of all stakeholders in public-private partnerships (PPPs) policy but it is yet tackle the challenges. According to some interviewees from the Association of Building and Civil Engineering Contractors of Ghana, the establishment of a regulatory framework could serve as a watchdog for reported patronage during the awarding of government contracts.

The responses from interviewees on the application of TQM model in the construction sector in Ghana was recorded and analyzed. The results of the interviews conducted revealed that very few construction companies have implemented Total Quality Management model in their operations. The TQM principles practiced by these companies are mainly leadership and supplier quality management, and work environment and culture. The other principles of TQM such as measurement and feedback, continuous improvement, systems and processes have low levels of implementation/practice in the Greater Accra Region.

5.4 Conclusions From Interview

The interview conducted demonstrates that the construction sector in Ghana contributes a significantly to the development of the country. The sector provides job for thousands of people in the Accra Metropolis and at the same time contributing to social development with the numerous building infrastructure projects. However, due to the lack of regulatory authority to oversee and monitor the performance of clients, professional consultants and contractors, the sector is faced with several

challenges. In addition, the responses collated from the interviews highlight high housing deficits amidst numerous building construction contracts awarded each year. The level of implementation of Total Quality Management model in the construction sector is low. The chapter presented the data analysis and research results. The chapter specifically covered the data and information description by reviewing and organizing the data for analysis. The chapter further described the context of research sites by specifically looking at the analysis of the questionnaires, conclusions from the questionnaires, analysis and conclusions from the interviews conducted.

6.0 CONCLUSIONS

The main objective of this research is to analyse the extent of stakeholder engagement in defining projects and project deliverables, and major causes of project misalignment in construction sector. The problem statement covers the reasons why this research area was chosen and the researcher sought to find out if there is really a construction industry as some authors questioned the its existence. Furthermore, the statement of the problem tackled the reasons behind the failure of most construction projects with references from some authors. Some authors specified that projects failed because the stakeholders fail too often to appreciate the scope of the project or user needs.

However, other authors cited poor alignment between actors and collaborators as the major causes of project failure. What prompted the research to be carried out in Ghana is the common phenomenon where construction projects are abandoned or left uncompleted for several years. This phenomenon is common across the country and the Greater Accra region is of no exception. There have been several undocumented reasons why these projects are abandoned, hence the objective of this study to analyse the impact of project misalignment with business objectives on the overall project performance. This research carried out in the Greater Accra region focused on the causes of project misalignment, impact on project objectives, impact on project performance, the nature on the construction sector in the region.

The research further sought to find out the extent of application of Total Quality Management principles and philosophies in the construction sector whiles focusing on stakeholder engagement in defining projects and project deliverables. The focus of the research was on the construction of housing in the region and the researcher reviewed relevant articles from literature in relation to the topic. These topics include; the history of construction in Ghana, concepts of quality management systems, and the application of total quality management in Ghana.

Considering the geographical area of the Greater Accra region, the researcher employed a sample size determination technique adopted by Slovin (1960) to sample 120 respondents for this research. The samples were taken from respondents in the Accra Metropolis, Ga South, Ga West, Ga East, and Tema Metropolis. The participants of the study include clients, professional consultants and contractors who are play significant roles in the Ghanaian construction sector. The study followed ethical standards with the consent of the participants sought prior to data collection. Out of the 120 questionnaires distributed, 98 were completed and returned representing 81.7% response rate. The researcher conducted interviews on respondents on various topics including the stakeholder engagement in projects, extent of application of TQM in Ghana, and causes of project misalignments.

The data collected from the respondents using the questionnaires was coded and the responses entered into the Statistical Package for Social Sciences, SPSS for analysis. The results of the findings revealed respondents with many years of working experience in the construction sector serving as project managers, civil engineers, quantity surveyors, supervisors among others. These respondents have different levels of education; construction Technician Certificate (41.8%), Diploma (27.6%), Undergraduate degree (23.5%) and postgraduate degree (7.1%). Males representing more than 90% dominate the workers in the construction sector in Ghana.

The respondents ranked some factors identified from literature to influence project misalignment and the three highest ranked factors are lack of communication (1st), poor collaboration (2nd) and process non-compliance (3rd). The findings revealed that customer satisfaction is the main component of Total Quality Management. In addition, the respondents agreed that TQM is management philosophy and practice, which ensures efficient and effective use of available resources to help achieve the objectives of the business. The findings also revealed that teamwork and participation is very necessary for the

attainment of project objectives as well as continuous improvement. Furthermore, the findings revealed that the components of Total Quality Management principles implemented in the Ghanaian construction sector are management leadership, supplier quality management, and work environment and culture.

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