
Client-contractor relations on construction projects in Ghana

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Abstract: This study sought to determine ways to improve the relationship between clients and contractors on construction projects. The study identifies 14 measures central to improving relationship building between clients and contractors within the construction industry and their prevalence explored from 145 contractors, conveniently sampled. Data obtained from the study is analysed by mean score ranking. The findings revealed that ‘ensuring professionalism from both parties’, ‘achieving client and contractor satisfaction’, ‘effective communication between parties’, ‘ensuring commitment from both parties’, ‘attaching importance to the project by each party’, ‘ensuring trustworthiness’, and ‘conformance to contract agreements from both parties’ are highly significant measures that contribute to improving client-contractor relationship. Neglect of the identified measures by either party may lead to frustration from the individual and overall objectives of projects. This study makes an original contribution of exploring the area of client-contractor relationship management in Ghana from the practitioners’ point of view. In practice, the findings from this study should assist construction practitioners in Ghana as well as those from other developing countries who seek to manage relationships between clients and contractors on projects.

Keywords: client-contractor relations; construction projects; construction industry; measures; effective communication; satisfaction; trustworthiness; project organisations; client-contractor satisfaction; contract; Ghana.

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1 Introduction

Temporary forms of cooperation and working constellations, like, projects, are widely seen in many industries (Buvik and Rolfsen, 2015). By definition, 'projects are characterised by finite time spans and this transient feature may influence working in such temporary systems' [Buvik and Rolfsen, (2015), p.1]. As a practical and theoretical initiative project management focuses on collaboration, communication and performance-based selection of project participants (Jelodar et al., 2016). This is considered a solution to the issues that arise from the project oriented and adversarial nature of the construction sector (Jelodar et al., 2016; Meng, 2012; Yeung et al., 2012). According to Buvik and Rolfsen (2015), teams in project settings are prone to different challenges during the development of working relationships. Poppo et al. (2008) posited that the interaction between project team members is a temporary phenomenon which may be influenced by the history of interactions and the previous experiences between participants. Buvik and Rolfsen (2015) added that such temporal aspects of relationships may affect work and consequently influence the success of a project.

Most organisations in the world, of which the construction industry is part, are established with the aim of minimising cost and maximising profit (Atuahene et al., 2017). The construction industry is one of the largest industries in the world, making great contributions to the gross domestic profits of many countries (Pal et al., 2017). This positive impact being made by the construction industry is as a result of the adoption of various techniques like the lean principles (from the automobile industry) and offsite manufacturing techniques (from the manufacturing industry) (Atuahene et al., 2017). Despite the fact that the incorporation of these principles have made the industry efficient and effective, it is still slow at adopting supply chain management best practices (Pal

et al., 2017; Gadde and Dubois, 2010), and this in most instances give rise to relationship issues (Atuahene et al., 2017). As a concept in the field of marketing, relationship has gained attention among researchers within the construction industry. The construction industry is made up of many stakeholders that include the client, contractor, consultants, subcontractors and the likes, who are required to fulfil their duties to enable them fit well into the puzzle of a construction project (Atuahene et al., 2017). Despite the different levels of relationships that exist between these stakeholders, they are all expected to cooperate with each other to meet the overall project aim. Irrespective of the procurement route taken on a construction project, two major forms of relationships should be established, i.e., either contractual or working relationship. It is however unfortunate that despite these known forms of relationships, there is still serious aggressions between clients and contractors which in most cases lead to conflicts, abandonment of projects, and the likes. Kwofie et al. (2018) indicated that for the construction industry to progress and be successful there is the need for a collaborative working environment to be created among all parties to a project.

Although relationship management has been identified to be the next generation of project management, only a few studies have investigated project-based relationship management (Meng and Boyd, 2017). It is however, very encouraging to know that some of the studies being conducted of recent are tailored towards relationship management in construction projects. Among the recent studies conducted, researchers have sought: to illustrate how a construction project can be delivered through the development of social relations capital (Davis and Walker, 2009); to develop a performance index for relationship-based construction project management (Yeung et al., 2012); to develop a structured way of relationship development to add value to construction projects (Davis and Love, 2011); to examine the significant effect of relationship management on project performance in construction (Meng, 2012); to develop a framework for relationship quality in construction project management (Jelodar et al., 2016); to explore the contribution of construction project managers to relationship management (Meng and Boyd, 2017); etc. Engström et al. (2009) indicated that the key to any business success is client satisfaction. Client satisfaction exists in twofold; “the client must understand why changes it has not initiated have taken place, and they should understand the full implications of the changes that it has intended” [Engström et al., (2009), p.22]. This notwithstanding, at times the client becomes ignorant of these issues, which go a long way to affect the trust which clients have for contractors. Dainty et al. (2001) therefore posited that the development of relationships of trust between clients and contractors seems to be difficult. This is because “in the project-based setting of the construction industry business partners lack the time to engage in lengthy interaction processes that contribute to the development of trust in more enduring organizational forms” (Dainty et al., 2001). Despite the numerous studies conducted in the area, there is still the lack of clear understanding on the dynamics of relationship management that can lead to a successful partnering between the clients and contractors of projects. To help bridge this research gap this study seeks to examine ways to improve the relationship between client and contractors on construction projects. It is evident that the study and understanding of relationship development in a project context is a challenging task because of the specificities of project business and also due to the discontinuity of demand (Crespin-Mazet et al., 2015). This notwithstanding, this study makes an original contribution of exploring the area of client-contractor relationship management in Ghana from the practitioners’ point of view. In practice, this is encouraging, especially for the

construction practitioners in Ghana as well as those from other developing countries who seek to manage relationships between clients and contractors on projects.

2 Literature review

2.1 Construction relationship factors

The Oxford English Dictionary defines relationship as a way in which two or more people feel about and behave towards each other (Meng, 2012). Relationship building is added skill stakeholders on projects should possess because of its ability to result in consensus building as far as a project is concerned. Bourne and Walker (2008) indicated that the success or failure of projects is directly related to its stakeholders' perception of the value created by the project and the nature of their relationship with the project team. In the construction industry, contractors and clients are also classified as buyers and suppliers respectively. Pala et al. (2014) identified four main forms of relationships between buyers and suppliers on construction projects from literature and these include:

- 1 *Transactional relationships*: the main active force in this form of relationship is the price-based transaction. In other words, this form is a contractual relationship. Emphasis is placed on the value (money) involved in the arrangement.
- 2 *Series of transactions*: organisations involve themselves in series of transactions when there is an existing relationship between parties. Meanwhile this form of relationship actually emphasises on performance. Implying that, the performance of a supplier will determine the longevity of future transactions.
- 3 *Project collaboration*: this form of arrangement can be simplified as working relationships. The emphasis is on how stakeholders can bring their maximum best to the realisation of the project objectives without monetary contribution. Such arrangement occurs based on either transactional relationships or series of transactions over some time or a deliberate decision to build collaborations with suppliers.
- 4 *Long-term strategic partnering*: whilst the project collaboration is project specific, the long-term strategic partnering focuses on future organisational collaborations towards future projects.

With the exception of transactional relationships, all the remaining three focus on building working relationships. Although, the transactional relationships might kick-start the others, it is at the discretion of the contractor in the context of the aforementioned relationship types to decide whether to continue such relationship or not. Explicitly, two forms of relationships are realised from the relationships under review, these are either contractual or working (social) relationships. In the context of client and contractor relationship, it will be easier and simpler to mimic the relationships between the contractor and suppliers since there seem to be similarities. However, this is not the case as the focus of the particular project may be different. Moreover, studies on client and contractor relationships have considered the contractual relationships leaving-out the working (social) relationship.

2.2 Client-contractor relationships on projects

Construction has always represented one of the most relevant industries for the global economy, boasting of a tremendous impact, among others on macro-monetary policies on the international level (Abatecola and Cristofaro, 2016). Such an industry should therefore not be played with, especially when it comes to the relationships that exist among key stakeholders. According to Musah et al. (2017), to control conflicts in projects, it is very important to maintain healthy relationships. Client-main contractor relationship has been considered as the main relationship in a construction supply chain (Meng, 2012; Cox et al., 2006). Bourne and Walker (2008) indicated that project relationship management is a way in which project managers and their teams build and maintain relationships with the right stakeholders at the right time. This definition was further echoed by Veal (2011) to mean the active development, cultivation, and maintenance of project-associated relationships. Meng (2012) indicated that since construction is regarded as a traditional industrial sector, the traditional approaches used in carrying out activities often lead to various problems like adversarial culture and poor performance in projects. Unlike project planning and control, relationship management pays particular attention to the importance of people in the project management process. As a result of this, the adoption of relationship-based management approaches should control the traditional problems in construction projects through encouraging collaborative working within and between project organisations (Smyth, 2015).

2.3 Managing client-contractor relationships on projects

The relevance of the client in any industry cannot be denied (Ojelabi et al., 2018). Since the sustainability of any form of business is largely dependent on its clients it is necessary for business organisations to maintain healthy relationships with their clients (Ojelabi et al., 2018). Healthy relationships between parties contribute to the well-being of the project. The ability to manage relationship is an added advantage to a firm (Bolton and Tarasi, 2007). In a study by Wasti et al. (2006), it was revealed that relationships between parties to a contract has now transformed from fierce competition to a win-win situation. Harmonious living among client and architects are based on active ingredients such as fairness, trustworthiness, conformance to the terms of contract (Soetanto et al., 2001), client satisfaction, communication and preference of brand (Bolton and Tarasi, 2007). Every (1942) opined that, there is an ever-increasing conflict between contractors and clients because of unprofessionalism, mistrust and unfairness displayed by the former. However, he was quick to add that, satisfaction of the client most importantly is breeding grounds leading to better and healthy relationship between the client and contractor. Additionally, involving the contractor at the developmental stage of the project is an added factor for establishing stronger bond between the client and contractor. Trust has the ability to enforce social and economic sustainability between parties to a project (Wicks and Berman, 2004). Prior (2012) believes that trust and commitment are pre-requisite for healthy relationship development and activates the flow of information between parties. Satisfaction of buyers of a product is another factor of healthy relationship that makes the buyer loyal to the supplier. Moreover, common goals also contribute to such relationship, although it is termed as a soft factor of relationship building.

Meng (2012) posited that certain key indicators are necessary to ensure that smooth relationship exist in a construction project. These include the development of mutual objectives, gain and pain sharing (where parties to a project are allowed to share profits or cost savings and to share losses due to errors or cost increases), the build-up of mutual trust, no-blame culture, joint working, effective communication, effective problem solving, risk allocation, continuous improvement, amongst others (Meng, 2012). Most of these measures were further echoed by Pal et al. (2017) who indicated that co-operational/collaborative relationship, communication and information sharing, continuous improvement, mutual objectives, effective problem solving, fair risk allocation and trust are all measures which may contribute to the management of relationships between buyers and suppliers in international engineering, procurement, and construction (IEPC) projects of Chinese organisations (Pal et al., 2017). Spang (2010) also added that good relationships may encourage partnering. Hence to ensure that a good relationship is developed, the nine regulations spelt out in a collaborative contract should be strictly adhered to: clear project specification; trust (regular project meetings to inform each other about project progress, project reviews and feedback meetings, general transparency, regulations for responsibility and decisions); fair risk handling; open communication; clear processes for project changes; clear and transparent organisation; common data systems; contractual incentive regulations; and contractual alternative dispute solutions.

Ambrose et al. (2008) identified from literature that, satisfaction of parties to a contract, commitment, mutual trust and effective communication are good ingredients for the development of relationships in the business environment. In a later study conducted by Ambrose et al. (2010) in ICT companies, adaptation was identified as another significant factor for relationships. Kumra et al. (2012) also highlighted that, trust, commitment of parties in terms of resources, adaptation and supplier developments have positive bearing on building relationship. Moreover, Kumra et al.'s (2012) study posited that experiences establish trust in a relationship from both parties. Raciti and Dagger (2010) pointed that, even-though trust is acclaimed to be a very strong basis for building relationship, such basis become shaky and even kills the relationship at a tender age without proper and effective communication. Communication is a means of sustaining relationships. Kannan and Tan (2006) indicated that, in order to read meanings into relationships, flexibility, communication, interdependence, trust and commitment should be present. Altinay and Brookes (2010) revealed in their study that satisfaction, commitment and trust are recognised in high esteem through appreciating the organisational culture of the parties.

In a study conducted by Akintoye and Main (2007) to examine the 'collaborative relationships in construction', it was revealed that risk reduction, reduction in development costs, common organisational culture among others are the reasons for forming alliance in the construction industry. Notwithstanding that, their study further indicated that there are elements that tend to nullify relationships in the construction industry such as mistrust, ineffective communication, different organisational cultures and low level of commitment. Frodell (2011) also developed criteria in achieving effective contractor relationship; the criteria indicated that suppliers are of the view that, their company health practices, professionalism, commitment and the capacity for development are driving measures for effective relationships. Davis and Love (2011) further asserted that, adequate trust and commitment work hand in hand because researchers in the relationship field believe that, these two factors are the enabling drivers

for better alliances. In addition, fairness from parties is described as a necessity for alliance development. The value of work, the uniqueness of the project and common ideologies of the parties enforce a collaborative relationship. Besides, ineffective communication is known to be an indicator of mistrust during a collaborative deal (Doran et al., 2005). Choo et al. (2009) also indicated that trust and buyer satisfaction precedes communication and supplier's honesty as far as relationship in the fashion industry is concerned. Sternquist et al. (2008) added ensuring credibility, dependence and value on product as common measures that can ensure healthy relationships.

From the literature reviewed, it is very evident that a number of studies have been conducted. Achieving fairness from both parties (M1), ensuring trustworthiness (M2), conformance to contract agreement from both parties (M3), achieving client and contractor satisfaction (M4), effective communication between parties (M5), preference of brand (M6), contractor involvement at development stage of projects (M7), ensuring commitment from both parties (M8), developing common goals and objectives (M9), Gain and pain sharing (M10), No blame culture (M11), effective problem solving (M12), Proper risk allocation by ensuring good health and safety practices (M13), attaching importance to the project by each party to ensure continuity (M14), clear project specification (M15), clear processes for project changes (M16), proper contract development (M17), Adaptation to change (M18), Interdependence (M19), ensuring flexibility in terms of contract (M20), Ensuring professionalism from both parties (M21) are all factors that have been identified to contribute positively to developing healthy relationships among parties to any project. For ease of reference, all the measures identified in literature have been given unique codes (M1 to M21). Because, there exist limited studies on client-contractor relationships, this study sought to explore the relevance of the identified measures to building healthy client-contractor relationship.

3 Research methodology

The study sought to determine ways to improve the relationship between client and contractors on construction projects. Factors that can help to improve the relationship between client and contractors on construction projects were identified through a comprehensive literature review. In selecting the appropriate literature, search engines such as SCOPUS, Google Scholar, Research Gate, Academia.edu, among others were used. These search engines were agreed on because most research publications within the chosen area of study have been archived in them. They also form majority of the key search engines for academic publications in the area of relationship development and management in the construction sector.

Because the focus of this study was to examine factors that can improve client-contractor relationships, several keywords were used to identify and search for the literature archived in the various search engines. Studies on relationships in construction projects are very broad with quite a number of keywords in literature. Using all the keywords related to the thematic area will mean that the size of literature obtained would be bulky. Because it is not possible for a single study to report on all the complexities involved in selecting majority of the potential relationship building research keywords, the researchers were posed with a major challenge of obtaining a workable number of related papers. This challenge was controlled by making the assumption that some of the top key words used in relationship management research

include, client-contractor relations, construction projects, construction industry, measures, effective communication, satisfaction, trustworthiness, project organisations, client-contractor satisfaction and contract. Since these keywords encompass almost everything about the topic, they were used to search for the papers. The search revealed a number of construction and business related journals that had published issues relating to relationship management. However, only those journals that showed papers significant to the thematic area as well as those published by reputable publishing houses were considered. Based on the screening of the literature obtained, papers related to the theme that were published in journals such as *International Journal of Project Organization and Management*, *International Journal of Project Management*, *Engineering, Construction and Architectural Management*, *Journal of Services Marketing*, *International Journal of Operations & Production Management*, *Industrial Marketing Management*, *Construction Management and Economics*, *Supply Chain Management: An International Journal*, *International Journal of Physical Distribution & Logistics Management*, *Journal of Business and Industrial Marketing*, and *International Journal of Quality & Reliability Management* were considered.

After the literature review, 21 (M1 to M21, as indicated in the last paragraph of Subsection 2.3) potential measures were identified. The measures were identified from various sources as shown in Table 1. These measures were piloted among 25 selected practitioners to determine their suitability for the proposed study. After the piloting, the practitioners indicated that some of the factors were closely related and had to be merged. For instance, it was suggested that: M6 and M7 be merged with M4; M10, M11 and M12 be merged with M9; M16 be merged with M18 and M15 be merged with M5. The factors that were merged have been highlighted in Table 1. After merging those factors, 14 measures underpinning healthy relationship between buyers and suppliers were arrived at and contextualised for the study.

A quantitative approach was used to solicit the views of experts within the construction industry on the issue under investigation. Close ended questionnaire survey was used to obtain the data. The questionnaire was developed based on the relationship management indicators identified from the literature review. The questionnaire comprised of two sections. The first section sought the demographic information of the respondents. The demographic information sought after included firm ownership, firm classification, industrial experience, and potential clients of the companies. The second sections sought the views of the respondents on the measures for improving client-contractor relationships. The respondents were asked to score on the Likert scale of 1 to 5 (where 1 = highly insignificant and 5 = highly significant) the significance of the measures that has the potential to improve on the client-contractor relationship in projects. The measures which the respondents were asked to score on the Likert scale included *ensuring professionalism from both parties*, *achieving client and contractor satisfaction*, *effective communication between parties*, *ensuring commitment from both parties*, *attaching importance to the project by each party to ensure continuity*, *ensuring trustworthiness*, *conformance to contract agreement from both parties*, *achieving fairness from both parties*, *ensuring good health and safety practice*, *proper contract development*, *adaptation to change*, *ensuring flexibility in the terms of contract*, *interdependence*, and *developing common goals and objectives*.

The questionnaire survey conducted in this study was specific to building projects completed in Ghana. The survey targeted two key project participants: project clients and project contractors. Database of the Ministry of Water Resources, Works and Housing (MWRWH) in Ghana revealed a total number of 250 such contracting companies and clients. With this list obtained, telephone calls were made, from which 145 contracting companies and clients were willing to participate in the survey, and so were conveniently sampled for the study. This sample is deemed appropriate because responses were obtained from more than half of the contracting companies and clients in the database of the MWRWH. Arrangements were made with the respondents, followed by personal visits which sought face to face interviews with them in their offices. The face to face session was important to ensure that any issues that needed to be clarified to the respondents were appropriately done to ensure the smooth answering of the questions. The Cronbach alpha reliability test was run and data was analysed using mean score ranking with test value of 3.5 ($p < 0.05$) to identify the significant measures for relationship building in the Ghanaian construction industry (GCI). The mean score analysis was performed because the researchers wished to determine the key measures in improving client-contractor relationships. The test value of 3.5 was chosen because the most critical measures that can improve client-contractor relationships were sought after.

4 Findings and discussion

4.1 Respondents' profile

The background of the respondents (Table 2) alludes to the fact that, D1K1 and D2K2 contractors were more as compared to D3K3 and D4K4. The Ministry of Water Resources, Works and Housing in Ghana has four categories of construction companies-D, K, E and G, based on the nature of works the organisations engage in – building, civil engineering, electrical and plumbing works respectively (Ayarkwa et al., 2012). There are four financial sub-classifications within these categories – classes 1, 2, 3 and 4 – which set the limitations for companies in respect of their asset, plant and labour holdings, and the nature and size of the projects they can undertake (Ayarkwa et al., 2012). Class 1 has the highest resource base, decreasing through classes 2 and 3, with class 4 having the least resource base. It is therefore not surprising that the top two classifications were dominant because the level of works executed requires the services of contractors with high technical and financial status. The respondents from the construction industry were top and semi-management staff who occupied position of project managers.

On the average, 55% of the respondents have at-least ten years of working experience in the GCI. In addition, many of the contractors have worked with both public and private sector clients which position the study in the proper context. Exposure to different clients informs contractors how to relate to their paymasters (Atuahene et al., 2017).

Table 2 Demography of respondents

<i>Demographic information</i>	<i>Options</i>	<i>Frequencies</i>	<i>Percentage (%)</i>
Ownership of firm	Indigenous	93	64
	Foreign	24	17
	Both	28	19
Total		145	100
Firm classification	D1K1	61	42
	D2K2	47	32
	D3K3	26	18
	D4K4	11	8
Total		145	100
Experience in industry	less than or equal to five years	22	15
	Six to ten years	43	30
	11–15 years	29	20
	16 years and more	51	35
Total		145	100
Clients	Private	27	19
	Public	13	9
	Both	105	72
Total		145	100

4.2 Measures for improving client – contractor relationships

4.2.1 Reliability test

According to Gliem and Gliem (2003), it is very important to conduct a reliability test on Likert scale type of questions since it helps in determining the credibility of the results. As a result of this the Cronbach alpha (α) test was run on the data received from the respondents and a coefficient of 0.837 was recorded. The various relationship measures recorded coefficients ranging from 0.813 to 0.845. The coefficients recorded are acceptable since it achieved a minimum value of 0.813 which is higher than the minimum 0.800 as suggested by Gliem and Gliem (2003). All the 14 measures were ranked based on their mean scores. Table 3 shows that 12 out of the 14 measures were ranked as significant (with the means greater than the test value of 3.5, $p < 0.05$). Table 3 further shows that the seven key significant measures that can improve client-contractor relationships include: 'ensuring professionalism from both parties (4.280)'; 'achieving client and contractor satisfaction (4.200)'; 'effective communication between parties (4.103)'; 'ensuring commitment from both parties (4.090)'; 'attaching importance to the project by each party (4.028)'; 'ensuring trustworthiness (4.014)'; and 'conformance to contract agreements from both parties (4.007)'. Other significant measures include;

‘achieving fairness from both parties (3.938)’; ‘ensuring good health and safety practice (3.827)’; ‘proper contract development (3.710)’; ‘adaptation to change (3.579)’; and ‘flexibility in terms of contract (3.521)’. However, ‘interdependence (3.310)’ and ‘developing common goals and objectives (3.262)’ were identified to be insignificant measures for building healthy client-contractor relationships. These measures are discussed in details in the following subsections.

Table 3 Measures for improving client - contractor relationship

<i>Measures</i>	<i>Mean score</i>	<i>Std. deviation</i>	<i>Ranking</i>
Ensuring professionalism from both parties	4.2797	1.0441	1st
Achieving client and contractor satisfaction	4.2000	0.8866	2nd
Effective communication between parties	4.1034	1.0255	3rd
Ensuring commitment from both parties	4.0900	1.0535	4th
Attaching importance to the project by each party to ensure continuity	4.0276	0.9926	5th
Ensuring trustworthiness	4.0138	1.1055	6th
Conformance to contract agreement from both parties	4.0069	1.0411	7th
Achieving fairness from both parties	3.9379	0.9518	8th
Ensuring good health and safety practice	3.8276	1.2153	9th
Proper contract development	3.7103	1.0796	10th
Adaptation to change	3.5793	1.0971	11th
Ensuring flexibility in the terms of contract	3.5211	1.1091	12th
Interdependence	3.3103	1.0770	13th
Developing common goals and objectives	3.2621	1.0867	14th

4.2.2 Significant measures for improving client –contractor relationship

This subsection discusses the key significant measures for building a healthy client-contractor relationship on construction projects. The measures are discussed to include the following:

4.2.2.1 Ensuring professionalism from both parties

Ensuring professionalism from both parties was considered as the most significant measure for building healthy client-contractor relationship. This finding corroborates literature (Frodell, 2011; Every, 1942). Professionalism is a basic input for the development of an efficient relationship between the parties to a project. It is pivoted by the cardinal duo of technical core skills and acceptable moral standard practices. It is however very unfortunate that stakeholders to construction projects are not in the good books of each other. This has therefore put professional services and opinions under chronic criticisms. Since the construction industry employs law of contract in its operation, the client aims at getting the project done using the services of the contractor and the contractor aims at getting his reward from his paymaster. Like other industries, professionalism on the part of the client and contractor are very important. For instance, a contractor will not enter into a contract with a client who does not redeem his part of the

deal. Likewise, a client will not engage the services of a contractor who does not deliver quality work. Hence, professionalism can be synonymous to competence as stated by Altinay and Brookes (2010). Knowing the rights of each other will ensure that each behaves in a more professional way to enhance project success.

4.2.2.2 Achieving client and contractor satisfaction

Achieving client and contractor satisfaction was ranked as the second significant factor in ensuring healthy client-contractor relationships. Satisfaction is an ingredient for building healthy relationship even after the gestation period of a project (Altinay and Brookes, 2010; Ambrose et al., 2008; Bolton and Tarasi, 2007; Every, 1942). When parties to a contract are satisfied with each other's role, the perception of servant-master relationship paves way for a more cordial relationship between the client and the contractor. Satisfaction strengthens the loyalty of the parties involved in projects (Prior, 2012). For instance, if the contractor carries out the work to the expectation of the client, the satisfaction level of the client increases, and this in the long run creates that kind of a positive connection between the parties. This could potentially lead the contractor to gaining more contracts based on the client's recommendation to other clients.

4.2.2.3 Effective communication between parties

As the basic means through which project teams interact with project counterparts, effective communication can ensure a healthy client contractor relationship. Through effective communication the client and contractor can exchange information and link each other up to achieve the project objectives. For such a communication to be achieved, the client and the contractor should both learn how to properly convey the needed information to each other. This, if done can create a mutual understanding and proper collaboration between the client and the contractor through knowledge interaction and information transmission. In the absence of an effective communication it is impossible to establish a healthy relationship with others. Atuahene et al. (2017) indicated that communication as a factor for healthy relationship is of the same level as the role of blood in the human body. Lack of open communication has been identified as a major reason for the failure of construction partnering (Meng, 2012). Engström et al. (2009) indicated that communication between the client and the contractor should be highly observed during the overall project life cycle, possibly because a lack of strategic direction and objective-related communication can lead to delays, time and cost overruns which may affect the two parties (Wu et al., 2017).

4.2.2.4 Ensuring commitment from both parties

Commitment is important in ensuring relationships. Commitment within the construction industry brings together the key areas which are vital to delivering projects on time, safety and within budget. This finding concurs with that identified in literature (Kumra et al., 2012; Prior, 2012; Frodell, 2011; Davis and Love, 2011; Altinay and Brookes, 2010; Ambrose et al., 2008; Akintoye and Main, 2007; Kannan and Tan, 2006). The commitment within the industry could be seen through procurement and integration (where ethical sourcing enables best value to be achieved and encourages the early involvement of the supply chain); commitment to people (where valuing people leads to a

more productive and engaged workforce); client leadership (which is vital to the success of any project and enables the construction industry to perform at its best); sustainability (which will bring full and lasting environmental, social and economic benefits); design quality (which will ensure that the project meets the needs of all stakeholders, both functionally and architecturally); and health and safety (which is integral to the success, of any project, from design and construction to subsequent operation and maintenance). According to Frodell (2011) the measures for ensuring efficient relationships can be classified into input, throughput and output. This can be interpreted to mean that, there is an association between commitment and relationship or that the bond between the client and contractor is dependent on the level of commitment shown by them (Atuahene et al., 2017). Both client and contractor require enthusiasm and commitment from each other to be agile, adaptable and responsive. This if achieved will support collaboration and co-operation between them, and will ensure a successful project delivery.

4.2.2.5 Attaching importance to the project by each party to ensure continuity

Objectively, every individual or institution is ever ready to channel its resources into a life transforming activity provided it is of priority. Attaching importance to the project by each party to ensure continuity was also identified as a key factor to the development of a healthy client contractor relationship. According to Jones and O'Brien (2003), continuous improvement is very important to ensure constant delivery of greater value, which will in turn increase mutual competitive advantages. By so doing, the partners can further identify opportunities that can assist in eliminating non-value adding activities, thereby ensuring continuity (Meng, 2012). Sternquist et al. (2008) and Bolton and Tarasi (2007) had earlier alluded that preference of brand is an outstanding basis for relationship. The physical edifice which is the end project speaks volumes about the client and the contractor. Such reason pushes clients and contractors to merge their best resources in achieving value for money which ends in creating a good relationship between them.

4.2.2.6 Ensuring trust between the parties

The seriousness of every great relationship depends on the trust developed. Although, the findings from this study revealed that trust is another important factor for relationship building, it is surprising that it is not part of the first three measures. From observations, the researchers are aware that the genesis of every well-meaning relationship is trust. Importance of trust in a relationship is comparable to the foundation of a building because the absence of trust will terminate the relationship in the short term. According to Buvik and Rolfsen (2015), trust within the project team is associated with several outcomes that contribute positively to the success of projects. Such outcomes may include knowledge sharing, commitment, team satisfaction, formation of social networks, among others (Buvik and Rolfsen, 2015). Despite the numerous advantages associated with trust, Chiochio and Essiembre (2009) indicated that it is a complex phenomenon with a variety of meanings and impacts depending on the type of team and context. This notwithstanding, Wong et al. (2008) indicated that successful trust building within project teams could improve project outcomes. Trust is the basis upon which to build a smooth, collaborative, efficient and harmonious relationship (Tan et al., 2017). It is therefore very important that the client and contractor try their possible best to ensure that they develop mutual trust for each other.

4.2.2.7 Conformance to contract agreements from both parties

Conforming to the contract agreements on the part of the parties was ranked as the seventh significant factor for improving client-contractor relationships on projects. The contract document specifies into details the expected duties of the client and contractors. Legal disputes in construction mostly arise due to the inability of some stakeholders to perform their duties accordingly. In other words, accepting and executing a project in accordance to the stated principle automatically brings the client and contractor together. Soetanto et al. (2001) found in their study that conforming to the contract agreements ensured healthy relationships among the parties to the project. This is evident that once the contractor and the client conform to the contract agreements, there is no room for one of them to be cheated by the other. This will ensure a peaceful and a very good working collaboration between them.

4.2.3 Insignificant measures that influence client – contractor relationship

4.2.3.1 Interdependence

Interdependence was considered as an insignificant factor for building healthy relationships between clients and contractors. This finding disagrees with that reported in literature. Researchers such as Kannan and Tan (2006), Sternquist et al. (2008) and Frodell (2011) indicated that, interdependence is a triggering factor for building healthy relationships because parties to a contract need the complimentary role of each other to survive. Although this study had proved otherwise, the researchers had a strong feeling that as far as the factor in question brings the two parties together, it is a potential factor for building healthy relationships. Despite not agreeing with other findings, this finding still agrees with that reported by Ambrose et al. (2010) who revealed that dependence is not a major factor for relationship building.

4.2.3.2 Developing common goals and objectives

Ideally, partnership agreements become an alternative when the people or institutions realise that there is similarity in their objectives. In relating the forgoing statement to the findings in Table 3, it is realised that common goal does not necessarily influence healthy relationship building. The finding corroborates Doran et al. (2005) and Akintoye and Main (2007) assertion that, it is the common ideologies that draws two different people or institutions together. However, common goal or ideology has been termed by Prior (2012) as a soft factor for building relationships. Probably, this is because the objectives of each party on a project differ from the other. However, for the sake of the success of a project, it is always important that the parties to a contract have one aim of ensuring that the project is a success, though they may have different ideologies.

5 Conclusions

There is widespread literature on client-contractor relationships in the construction industry. However, there is an urgent gap that needs to be filled when it comes to the actual management of such relationships between the client and the contractor. To bridge the gap this study reported on ways to improve client-contractor relationships on

construction projects. A questionnaire survey of clients and contractors in the GCI was conducted. The findings from this study revealed that: 'ensuring professionalism from both parties'; 'achieving client and contractor satisfaction'; 'effective communication between parties'; 'ensuring commitment from both parties'; 'attaching importance to the project by each party'; 'ensuring trustworthiness'; and 'conformance to contract agreements from both parties' are ways in which client-contractor relationships can be improved. Increased emphasis on improving project-based relationships has gained recognition in academia and the construction industry of recent. Relationship management used to be a part of business management at the corporate level. Since construction which is also a project-based industry is made up of a team of business oriented personnel relationship management has become highly significant in the industry. Ongoing change movement from traditional ways of working to a more collaborative way of working has called for the need of an effective relationship management in the project environment. The findings from this study has clearly indicated that both the client and contractor are in agreement that establishing a well-meaningful relationship should help in providing a fair playing ground for them. It is the responsibility of both parties to make the relationship between them work through observing the identified measures. Clients are recommended to adopt innovative procurement routes, which encourage relationship building for projects. The contribution of this study to the international body of knowledge is evident in the fact that measures which can help to encourage healthy client-contractor relationships are clearly identified to assist practitioners to effectively manage their projects.

6 Limitations and future research directions

Though this study is of significance, some limitations were encountered. The respondents interviewed were only based on those conveniently sampled from the approved list provided by the Ministry of Water Resources, Works and Housing in Ghana. The inability of the researchers to interview all the 250 clients and contractors leaves much room to be desired though a sizeable number was interviewed. It is recommended that future studies target the remaining clients and contractors who did not participate in this survey. Also, this study only settled on 14 measures which could improve on client-contractor relationships based on the literature review conducted. A detailed qualitative study could be conducted on the respondents to see if there are other pressing measures that could also be put in place to improve on such relationships in the construction industry. This is because in the current survey the respondents were not given such an opportunity to further indicate other measures which they felt were also significant but were not considered in the study. Finally, the factors identified in this study are very sensitive and there is the tendency to have some interdependent relationships amongst them. No statistical analysis was however performed to show such interdependencies. A future replication of this study could incorporate a statistical analysis that could show such interdependencies. There are also other potential areas which could be explored should any researcher feel the need to further any studies on relationship in the construction industry. Future research direction could be tailored towards: the impact of relationship development on addressing contractual related conflicts; the viability of relationship contracting in the construction industry; and effects of relationship development on performance improvement of construction projects. By so

doing there could be a more advanced knowledge on ensuring healthy relationships in the construction industry.

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