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Exploring Key Contractor Factors Influencing Client Satisfaction Level in Dealing with Construction Project: an Empirical Study in Jordan

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Abstract:

Client satisfaction in construction industry can be defined as the ability of a contractor to meet the client expectations. A contractor must have a thorough understanding of client expectations and be able to satisfy these expectations. The outcomes of the construction projects can be evaluated in numerous ways. One of the methods is to measure the satisfaction of participants as represented by the differences between their expectations and perceptions. This measurement is used widely in construction as it promises benefits, such as the improvement of product delivery, and enhances services quality by identifying some necessary changes. Satisfaction measurement is gauged by evaluating the level of client satisfaction of construction performance. The measurement of client satisfaction is also based on the quality of the end product. This evaluation is used to encourage contractors to improve their performance to a required level and to ensure that the projects are delivered as expected in terms of time, budget and quality. This paper discusses client satisfaction attribute on contractor performance. The aim of this paper is to reach the most important factors influencing client satisfaction level of performance provided by contractor in Jordanian construction industry. The results shows that there are seven extremely important factor that have a significant affect in client satisfaction level and immediately need to improve namely (1)service quality (2)Communication skills (3)adherence to budget, (4)safety performance, (5)adherence to schedule, (6)sit personnel skills, and (7)management capabilities.

Key words: Client Satisfaction Attributes, Contractor Performance, Construction Industry

INTRODUCTION

Background

In the past few years, the Jordanian construction sector has experienced immense growth during the boom that took place recently, encouraging more investment in the Jordanian construction industry and raising the importance of deploying management philosophies advancement to this industrial segment, the core economic activities of Jordan consist of real

estate and tourism. Lately, the construction industry has become a key component of the Jordanian economy between, (2002-2011). The Jordanian construction industry accounted for 4.6% of Jordan's average gross domestic product. In fact, the industry has achieved a 13.3% growth rate, on the other hand, the residential construction accounted for an average of 87% growth rate of all construction permits during 2005-2011 (Attar and Sweis, 2010; Department of Statistics, 2012). In view of this, to keep the industry sustainable, it is critical to devise measures on how to improve the client satisfaction level. This is because construction clients play a crucial role in the industry's distinction and survival.

The subject on client satisfaction in the construction sector could be traced back to the 1980s**.** An investigation carried out by Ashley et al, (1987) on the determinants of the success of construction projects highlighted six criteria for measuring success. These are budget, schedule, client satisfaction, functionality, contractor satisfaction, and project-manager/ team satisfaction. Hence, the creation of a common client satisfaction measurement or approach is essential in the construction industry and this will be carefully explored through this study.

Client/customer satisfaction has gained very much attention in the last few decades in all areas of production. In an increasingly competitive and dynamic environment, greater attention is continuously paid to customer relationships and satisfied customers (Eriksson and Vaghukt, 2000). For companies, customer satisfaction is an effective way to differentiate themselves from competitors and gain competitive advantage (Woodruff, 1997) but it is also one of the key issues in their efforts towards improving quality (Fornell et al., 1996). Companies use various forms of customer satisfaction approaches in developing and monitoring product/service offerings in order to manage and improve customer relationships (Burns and Bush, 2006). In addition, measuring customer satisfaction has several benefits for organisations:

- Improvement of communication between parties and enabling mutual agreement;
- Recognition of the demand of improvement in the process;
- Better understanding of the problems;
- Evaluation of progress towards the goal; and
- Monitoring and reporting accomplished results and changes.

The importance of client/customer satisfaction has been investigated by many researchers in construction industry (Maloney 2002; Yasamis *et al.* 2002; Torbica and Stroh 2001). Therefore client satisfaction is a fundamental issue for construction participant who must constantly seek to improve their performance if they are to survive in the presence of the concept of globalization of construction services (Cheng et al., 2006). Considering the market of construction industry around the world, it is back warded and under-researched in the client evolutionary stage (Kärnä, 2004). Customer demands are rapidly changing as a response to changing organizational and market imperatives. New procedures and solutions are required to meet the growing demands and elevated standards (Smith and Love, 2001).

Customer satisfaction has been known as quality dimension in construction (Yasamis et al. 2002; Barrett 2000; Hellard 1993; Palaneeswaran et al. 2006) and as a significant factor representing success of a project (Chan and Chan 2004; Delgado-Hernandez and Aspinwall 2005). Customer satisfaction also can be considered as a means for expanding the construction process (Egan 1998; Liu and Walker 1998; Mbachu and Nkado 2006) and a tool for mutual learning (Love et al. 2000; Bertelsen 2004).The function of the construction industry is to provide clients with facilities that meet their needs and expectations. One of the principles of logistics is a management philosophy that effectively determines the needs of the clients. Ensuring operational quality at each stage in the construction process should ensure that the quality of the final product will satisfy the final client (Jang *et al.,* 2003).

Client satisfaction has continued to be a challenging and indefinable issue for some significant time in the construction industry (Egan, 2002). Rather unexpectedly, it is a feature of business which has not been paid the attention it deserves until today (Johnston, 2004). Numerous customers of the construction industry practice dissatisfaction at one stage or another, though there are many factors affecting it; the most important is inferior quality, overrunning project costs, delayed completion, incompetent contractors and consultants (HSE, 2002; Contract Journal, 2004). Former researchers have discovered that strategic decisions of a client may also have an influence on their own levels of satisfaction (Soetanto and Proverbs, 2004). Decisions such as selecting a suitable contractor without suitable consultation leads to poor project performance and eventually results in client dissatisfaction

Literature review

A construction contractor (as service provider) can be defined as an individual or an organization that is in charge of constructing the projects according to a contract agreement initiated between the contractor and the client. The contractors' responsibility is exemplified by constructing the project assigned to them within the scheduled time, in acceptable quality and within the budgeted cost keeping in mind the safety of the project. Projects that are incomplete to these three conditions will have an impact on the contractors' performance leading to extra cost on the client. That leads to breach of the terms and conditions of the contract. Therefore, contractors must have an excellent relationship with the clients in order to maintain a perception and understanding towards projects' completion.

Poor performance such as time delays, low quality and cost overrun are not uncommon in construction project (Lo et al., 2006). Frimpong et al., (2003) suggested that time delays and cost overruns arise primarily as a result of payment difficulties, poor contractor management, material procurement problems, poor technical ability, and escalation of material prices. On the other hand, some researchers have analyzed the major causes of quality defects, one of which Atkinson (1999) identified as human effort and another of which Love & Li (2000) described as poor workmanship. These studies also contributed to the identification of quality, time and cost as the three most important indicators to measure construction project performance. Conversely this may not ensure quality which is an indispensable measure in project delivery.

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Predicting the performance of the contractor is highly important for both the contractor and the owner (client).

Quality performance is defined as the totality of features required by a product or services to satisfy a given need, or fitness for purpose (Parfitt & Sanvido 1993). In other words, the emphasis of quality in construction industry is on the ability to conform to established requirements. Requirements are the established characteristics of a product, process or service as specified in the contractual agreement and a characteristic is any specification or property that defines the nature of those products, processes or services, which are determined initially by the customers. In order to achieve a completed project that meets the customers quality expectations, all parties to a project must acquire an understanding of those expectations, incorporate them into the contract price and other contract documents to the extended possible, and commit in good faith to carry them out (Ganaway, 2006).

Time performance is very important for construction projects to be completed on time, as the clients, users, stakeholders and the general public usually looks at project success from the macro view where their first criterion for project success appeared to be the completion time (Lim & Mohamed 2000). Salter & Torbett (2003) mentioned that time variance is one of the techniques for assessing project performance in construction projects. The element of time could indicate to project managers that the project was not running as smoothly as scheduled. Furthermore, the ensuring timely delivery of projects is one of the important needs of clients of the construction industry. Construction time can be regarded as the elapsed period from the commencement of site works to the completion and handover of a building to the client. The construction time of a building is usually specified before the commencement of construction. Construction time can also be deduced from the client's brief or derived by the construction planner from available project information.

Clients' satisfaction is regarded as a function of comparison between an individual's perception of an outcome and its expectation for that outcome. In the construction industry, client's satisfaction has remained an elusive and challenging issue for some considerable time. Dissatisfaction is widely experienced by clients of the construction sector and may be caused by many aspects but is largely attributable to overrunning project costs, delayed completion, inferior quality and incompetent service providers including contractors and consultants (Chan et al., 2001).

A range of models exists that may be used in studying the satisfaction levels of numerous members of the construction supply chain (Walker, 1995; Gable, 1996). However, only few have been selected as being appropriate to evaluate the satisfaction the construction customers. Not too many studies have been published regarding the use of formal models of the quality of service concerning the research on customer satisfaction (Gunning, 2000) and, customer satisfaction, as a significant factor of business success, remains as an subtle issue in the construction area (Cheng and Proverbs, 2004).

In the context of construction industry, determination of client satisfaction could be achieved by measuring the degree to which a certain physical facility, also known as a product and a construction process, also known as a service, meet and/or exceed what the customer has expected. Based on this definition, it is important to understand, assess or evaluate, define and manage or control such expectations in order to make the customers feel that his/her needs are met on time. As reported by Pmbok (1996), this demands combining both the conformance to specifications (The project's production should be the same as it was expected to be) and fitness for use (referring to satisfaction of the product or service to the real needs of the customer). This also emphasizes the important of the management accountability. Although all individuals or team members should contribute to this success, management remains the only responsible for achieving such success by providing the necessary resources needed, permanently enhancing or improving the project's organization and as well as the worth of the project's product. Again, in the construction sector, a completed facility refer to the structure that has been left standing when the entire project is completed and all the customer-service provider relations involved are over Yasamis et al. (2002) refers the entire transformation process as the contracting service. They indicate that the product/device quality dimensions (Maloney 2002) mark quality in the construction. The contracting facility, contracting service, customer satisfaction and the constructed facility explains the quality in construction.

Related work

Soetanto and Proverbs (2004), developed intelligent models to predict levels of construction customer satisfaction using the artificial neural network technique based on the view of customers on contractors' performance. Twelve interviews on experienced construction clients were conducted to derive the criteria of satisfaction measurement and followed by a UK-wide questionnaire survey resulting in 77 client responses. The adopted satisfaction measurement criteria consist of:

1. Quality of service and attitude of contractor
2. Main performance criteria and completion
3. Performance in preliminary stage
4. Performance of site personnel
5. Performance of resource management

The models identified that a well-established working relationship at site personnel level and method of contractor selection are fundamental factors that have significant impact on customer satisfaction. The study suggested that long-term, relationship-based procurement such as partnering and strategic alliance may have advantages over traditional competitive tendering and hence lead towards higher customer satisfaction levels.

Maloney (2002) proposed six factors contribute in the selection of the contractor which ensures customers satisfaction which is:

1. Contractor/customer relationship: considers the customers' view of a contractor in terms of trust, respect, integrity, willingness to partner, responsiveness and communication abilities.
2. Project management: considers the ability to plan, schedule, manage and execute all aspects of project from the conceptual design stage to project completion.
3. Safety: considers the commitment to the regulations, maintaining a safe work environment and employing workers with safe work habits.
4. Prepared/skilled workforce: considers the employees' knowledge of codes and techniques with quality performance.
5. Cost: considers the ability of contractor to manage project cost activities, providing lower cost alternatives, change orders' pricing and project building activities.
6. The general satisfaction: considers the general satisfaction of customer with the contractors' performance

In an overview of satisfaction research in the construction industry, Wilemon and Baker (1983) was found cost, time, quality, customer orientation, communication skills and response to complaints as parameters for client satisfaction. Kometa et al. (1995) recognised four vital clients' needs in the built environment, which are functionality, safety, and quality and completion time. Chinyo et al. (1998) assert that a comprehensive analysis and assessment of clients' needs will facilitate greater clients' satisfaction. Proverbs and Holt (2000) having identified cost as the most essential parameter required by construction clients, presented a model to meet clients' demand for lowest cost. Al-Momani (2000) and Ling and Chong (2005) identified quality of service as the major factor or need for addressing and assessing client satisfaction. Maloney (2002) elucidates how service quality facilitates client satisfaction. He identified ten determinants that need to be adopted and deployed by the contractor to exhibit service quality. These determinants include access, communication, competence, courtesy, credibility, reliability, service, tangibles and understanding and knowing the customer. According to Parasuraman et al. (1988), SERVQUAL is an instrument developed for assessing customer perceptions of service quality. Tang et al. (2003) highlight eight key factors for evaluating customer satisfaction: professionalism of service; competitiveness of service; timeliness of service; quality of design; degree of innovation; completeness of other considerations; availability of support for client, and supervision at implementation. Most recently, Yang and Peng (2008), in their study on customer requirements for construction project management service, highlighted cost, quality, time, communication, amongst other factors as dimensions for evaluating satisfaction. The authors present a customer satisfaction evaluation model that provides an appraisal system for generating client needs during service transactions.

Kärnä (2004) conducted an empirical analysis to explore client satisfaction (public and private) in Finland. And the study found that the need for contractors to improve performance related mostly to quality assurance, handover procedures and material. The author found that low satisfaction could be found in items related to quality assurance and handing over. These items were workability of handover material and maintenance manual, quality of assignment material, and repair of defects and deficiencies noticed during the handover inspection. This

highlighted the importance of quality assurance during the project and its impact on customer satisfaction. The low satisfaction factors usually emerge in later phases of the construction project, and require mutual cooperation between parties. Some attributes reflected vary strongly on how the customer perceives the success of the whole project. the study of projects which have had poor overall customer satisfaction, showed that customers assess the contractor's performance as poor in all areas, even if that was not the case(Kärnä, 2004).

Ahmed and Kangari (1995) argued that knowing well the values and the requirements of the client will enable the service provider (contractor), through his managers and other staff, to devise systems and approaches that uncover the root causes of their quality and service problems, and implement permanent changes to eliminate these problems. They developed a model based on multiple-regression analysis between the mean scores and two independent variables, these were: client satisfaction factors and clients' groups of industries tested. The equation, after substituting some definite variables with values, results in the mean satisfaction required according to the type of industry and for the chosen client satisfaction factor (Ahmed and Kangari, 1995). The factors were: (1) timeliness (2) client orientation (3) communications skills (4) cost (5) response to complaints and (6) quality.

Research methodology

This paper aims to identify the key factors that have a significant effect on client satisfaction level and other causes that are necessary to overcome the issues discussed above for incorporation into a preliminary conceptual framework. To determine the client satisfaction level two main questions were evolved; the first question is "What factors do clients perceive as being the most important when dealing with contractor organizations in Jordanian construction industry?" and the second question is "How do clients perceive the performance of contractor organizations in these factors? If these two questions were answered; a lot of issues will evolve for additional discussion.

The study used face-to-face preliminary interviews with construction client experts from Jordan, the interview was carried out to identify the key important factors influencing client satisfaction level and immediately need improvement, and other factors not mentioned in the literature. Six large class Jordanian clients were selected randomly and they participated the survey through interview. As Cavana et al. (2000) explains preliminary information gathering involves the search for in-depth information concerning the observed problems. The preliminary interview is commonly conducted through unstructured interviews to get ideas, feel for what is happening and the reasons involved.

Profiles of Expert Panel

Name	Position	Experience Years
1.Mohmmod Zalym	Manager of Construction company	10 years
2.Marwan hadad	Manager of Construction company	7 years
3..Amer Alrabadi	Engineer, Ministry of Public Works, Jordan	15 years
4..Khualed Alzubi	Ministry of Municipalities	20 years
5..Wlaed Alrababah	Ministry of Municipalities	20 years
6. Ali Alhorani	Manager of Construction company	15 years

Discussion and findings

The literature review further suggested that client satisfaction indicators for a particular type of satisfaction assessment should be limited in number, and selected in accordance with the nature and objectives of the assessment and with key satisfaction issues of clients, as identified in the assessment of their expectations. Any indicators identified should not mean to be exhaustive; neither should they be seen as universal. The indicators given for a specific type of client are not all adequate for every organisation that has specific needs.

Due to the large number of the factors from literature review, this study used interview as an instrument to select the key important factors for the Jordanian construction client based on service provider performance. The experts were asked according to their experience to identify the key important factors that the service provider (contractor) immediately need to improve in order to meet client satisfaction in Jordan. The results of the literature review considered thirty seven satisfaction factors based contractor performance from the point of view of clients. The experts were asked to mention the importance level of those factors. The factors were measured by 5 scale dimensions as 1= extremely important (Ei), 2= important (I), 3= average (Mi), 4 =less important (Si), 5 =not important (Ni).

Rating	Category	Description
1	Extremely important	Criteria is essential in assessing the contractor performance level and need immediate to improved
2	Important	Criteria is required
3	Average	Criteria may be required
4	Less important	Criteria may not be required
5	Not important	Criteria is not required

The results of interview indicated that, there are seven factors as key important and immediately the contractor need to improve them to meet the client satisfaction, namely (1) service quality (2) Communication skills (3) adherence to budget, (4) safety performance, (5) adherence to schedule, (6) sit personnel skills, and (7) management capabilities, According to the results the author discusses every factor with the previous study as mentioned below.

A. contractor Performance attributes

1. Adherence to budget (cost performance)

According to park (2009) cost performance is one of the most significant factors in performance measurement; cost refers to the budget estimate of the project from inception to completion. This dimension is very important for client, and have a significant effect on satisfaction level, project cost estimate need to be prepared for any project to ensure money is spent wisely. Cost performance indicates a comparison between the actual and the budgeted cost of the project. The most important thing for the client is to complete the project within a budget cost. This dimension was used frequently to measure the performance (Sami Kärnä, 2009; Ahmed and Kangari, 1995; Soentanto, 2001; tang, 2003; Maloney, 2002; Yang and peng, 2008; Chinyio, 1998).

2. Safety performance

Almost all of the discussed studies revealed that safety was a major aspect considered by clients. Many authors (Kärnä, 2004; Maloney, 2002; Soetanto et al., 2001; Chinyio et al., 1998) mentioned safety considerations as a dominant factor in all phases of any construction project. The policies followed, the rules and regulations adopted and the previous records of a contractor, all together influence the selection and the satisfaction of clients. Hinze (1997) mentioned that, in some project, the contractor will be asked to comply, not only with applicable local laws governing safety, health, and sanitation, but also with the owner's requirements may simply echo provisions already contained in the company safety program.

3. Adherence to schedule (time performance)

Adhering to strict construction time has been approved as the most considerable criterion for a successful project (chan & chan, 2004). The construction time can be defined as the time it takes to complete the project. This investigation defines time as the project construction duration. Fixed construction duration is essential to the client for timely completion. Time performance is measured by comparing the actual and planned duration the project. It would also depend on the early commitment of the project team to the schedule. By contrast construction delay or time overrun in a project may be caused by excusable delays (Othman, Torrance & Hamid, 2006), lack of qualified and experienced personnel and/ or a lack of human capital (Brown, Adams & Amjad, 2007). Time performance is important for client as mentioned (Ahmed and Kangari, 1995; Soetanto et al., 2001).

4. Sit personnel skills

The people/group involved in provision of services to the client, experience, skills, goals and commitments will influence the quality services and complete service provision and finally client satisfaction. Organisations, for instance, contractors and consultants in the entire construction industry that do everything for excellence, may reward, communicate and recognise, in ways that builds commitment and motivates staff to using their experience and knowledge for the advantage of the company to achieve full potential of their group at team-based, individual and company level (EFQM, 2005). The people issue hence has a crucial impact on service delivery and is seen as a key criterion of measuring client satisfaction.

5. Management capabilities

According to the rustles of interview and literature review the management attributes of contractor is one of the most important dimension for client satisfaction. This dimension involves management capabilities of contractor, material management, work force management, plant management, management and co-ordination of subcontractors, Strength of the contractor site team, proactive attitudes towards problems. The importance of management capability was mentioned by many researchers such as (Ling, 2003; Jin and Ling, 2006; Sami Kärnä, 2004; Maloney, 2002; Wong *et al.* 2003; Soentanto, 2001).

6. Communication skills

Good communications between service providers (contractor) and their clients play a vital role in achieving satisfaction of the client (Dainty *et al.,* 2006; Wild, 2004). Communication within project-based environments presents special challenges and different perspectives highlight the diversity of communication problems facing those working within the project based environments (Dainty *et al,* 2006). Previous studies displayed interactions between project teams and research professionals were often inhibited and limited project success (Gorse and Emmitt, 2004). Some communication principles include the use of advertising and media consultants can help achieve improved communication with client-increased efficiency (Namo

and Fellows, 1993). It is showed that clients will only get higher levels of satisfaction when the respective service providers get higher levels of performance in communications.

Communication is about keeping clients informed in a simple language that they can understand and listening to what they have to say. At times, the company has to adjust its means of communication for the clients, increasing the level of sophistication with an educated client and speaking softly and plainly with a newbie. It is about explaining the quality service itself; outlining the exact cost of the service; vividly explaining the trade-offs between cost and service; not forgetting to assure the customer that the issue at hand will be handled properly.

B. contractor Service quality

The concept of satisfaction is often viewed as a function of comparison, either between an individual's perception of an outcome and its expectation for that outcome (Locke, 1970), or a comparison of pre-purchase expectations and post purchase product or service performance (Churchill and Serprenant, 1982). As the levels of satisfaction to be achieved are dependent on the outcome of the comparison and perceptive thinking, that is to say, the standard of comparison and the balance of expectations and perceptions (Zeithaml *et al,* 1990), it is hence subjective in nature in the context of satisfaction measurement. The significance of the standard of comparison used, which is influenced by a client's characteristics including background, sector, experience and so on, and cannot be ignored.

A majority of the satisfaction measurement approaches involve subjective perceptions based on objective issues. In the construction industry, the measurement of client satisfaction is often associated with performance and service quality assessment in the context of projects or services received by the client (Parasuraman *et al*, 1985, 1988; Soetanto and Proverbs, 2004). The focus of construction client satisfaction is hence commonly kept on satisfying clients' needs on projects and that their expectations are met by their service providers including consultants and contractors.

An increasing appreciation of the need to satisfy clients of the construction industry has prompted some research efforts to investigate their satisfaction. A number of models have been developed to facilitate the measurement of satisfaction such as SERVQUAL (Parasuraman et al., 1988; Siu et al., 2001), performance assessment (Soetanto and Proverbs, 2004) and business excellence models (EFQM, 2005).

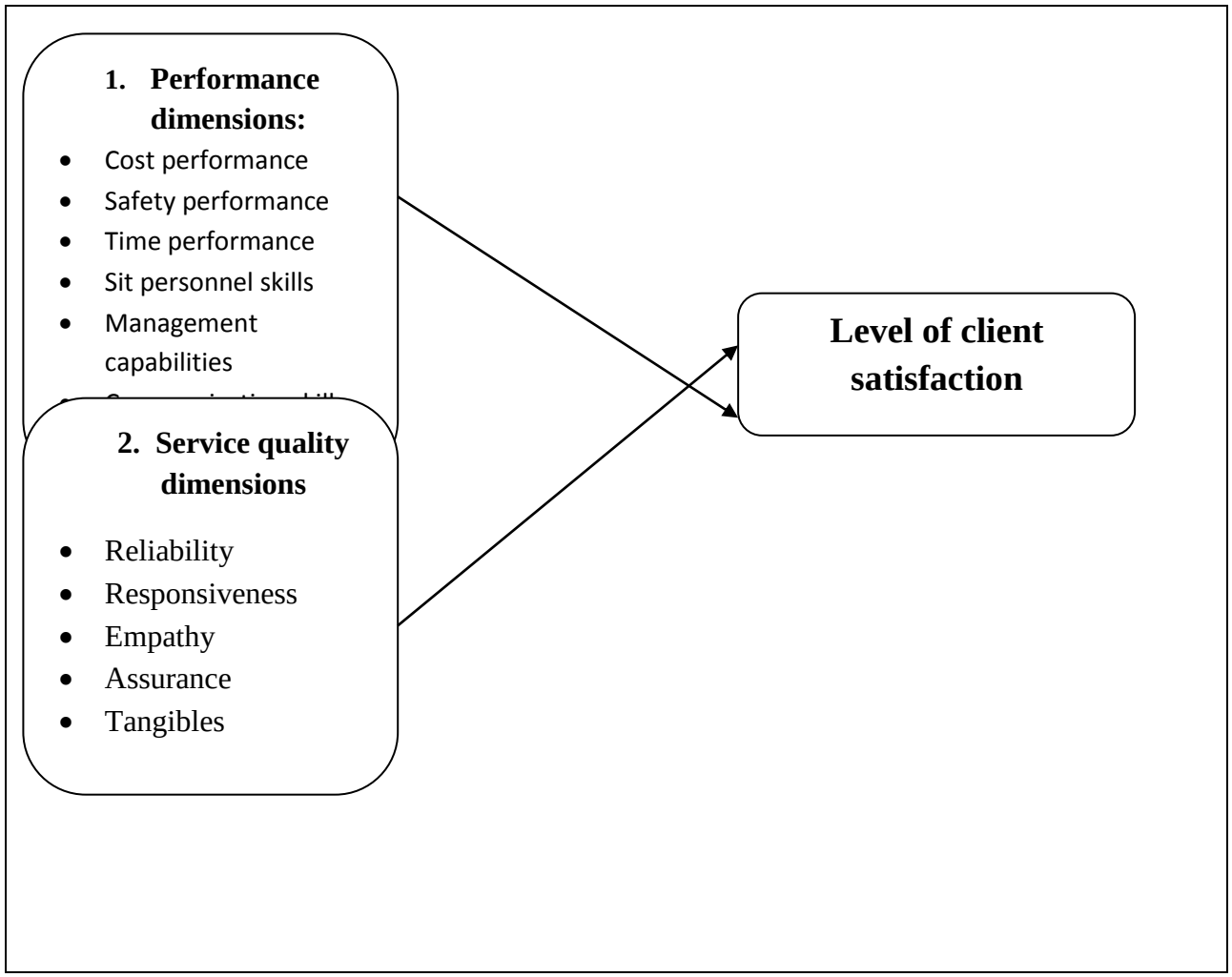
Parasuraman et al. (1988) developed the SERVQUAL model based on the results of previous studies (Churchill and Serprenant, 1982; Parasuraman et al., 1985) and argued that, although any service industry is unique in some aspects, there were five broad dimensions of service quality that are applicable universally, which include: Tangible, Reliability, Responsiveness, Assurance, and Empathy.

Quality is viewed as the degree and direction of discrepancy between client's perceptions and expectations (Zeithaml et al., 1990) and is often seen as an antecedent of client satisfaction (Fornell, 1992). Several conceptual models have been developed based on the SERVQUAL principles to measure service quality and to reveal the interrelationship with client satisfaction in the construction industry (Love et al., 2000; Siu et al., 2001). Client satisfaction is generally seen as the difference between perceived quality and actual quality performance and is related positively to service quality. However, the frame of reference or the standard of comparison used by clients to determine their satisfaction levels (Smith et al., 1969), have been somewhat ignored in these models and hence the applicability of these models to predict the levels of client satisfaction is limited.

SUMMARY AND CONCLUSION

A proposed conceptual model of customer satisfaction

Finally, A presents a proposed conceptual model that is developed based on the literature review and primary interview. This clearly shows the two main elements that need to be considered in assessing client satisfaction levels the first one the performance of service provider second the service quality of service provider. Both influence client satisfaction levels and can be evaluated as either positive or negative depending on the gaps of in client satisfaction levels. This approach could be useful to the construction industry as it is likely to improve understanding, enhance harmonious relationships and increase business opportunities. Also it may be useful for the clients to enhance and maintain their level of business performance. And this may encourage clients, consultants and subcontractors in enhancing their service and product quality and increase their levels of trust of the contractor capability. Furthermore, it is may also be useful as an instrument to gauge performance levels from other perspectives, such as sustainable development and innovation processes. Finally, it is intended that the results of the study will be used to develop a conceptual framework for further application in predicting client satisfaction levels in Jordan.



Source: (yazan alzubi, 2015)

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