

A CONCEPTUAL MODEL TOWARDS THE MEASUREMENT OF CONSTRUCTION CLIENT SATISFACTION

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Previous research findings indicate that it is five times more expensive to develop a new construction client than maintaining an existing one. Client satisfaction is therefore a fundamental issue for construction participants who must constantly seek to improve their performance if they are to survive in the global marketplace. However, client satisfaction has remained an elusive issue for a majority of construction professionals. This research reviews the general concept of the satisfaction phenomenon and investigates models used in its assessment. It examines how construction client satisfaction is measured in practice and investigates the literature to reveal the implications of strategic decisions on client satisfaction. It is revealed that identification of, and responses to client needs are the most important criteria adopted in the measurement of client satisfaction. The conclusions drawn represent the initial findings of an on-going research project that aims to develop a rigorous and empirical model identifying the impact of strategic decisions on client satisfaction.

Keywords: impact, improvement, literature review, performance, strategic decisions.

INTRODUCTION

The satisfaction phenomenon is regarded as an important aspect of life. In the construction domain, satisfaction and client satisfaction in particular, plays a fundamental role in determining the perceived success of a project (Ashley *et al*, 1987; Bresnen and Haslam, 1991). Identifying and satisfying the needs of clients is critical for the existence and competitiveness of the global construction industry. The concept of globalisation has added greater impetus to the importance of the subject matter of satisfaction. Client satisfaction, in effect, is essential for the survival of service providers (e.g. contractors and consultants).

In the construction industry, client satisfaction has been a problematic issue for some considerable time (Banwell, 1964; Latham, 1994; Egan, 1998; Egan, 2002) and as an aspect of business until now has been given little priority (Johnston, 2004).

Dissatisfaction is widely experienced by clients of the construction sector and maybe caused by many aspects but is largely attributable to overrunning project costs, delayed completion, inferior quality and incompetent service providers including contractors and consultants (NAO, 2000; HSE, 2002; CJ, 2004). Research findings suggested that it is five times more expensive to develop a new construction client than maintaining an existing one (BSRIA, 2003). Client satisfaction is therefore a fundamental issue for construction participants who must constantly seek to improve their performance if they are to survive in the global marketplace.

There exists a range of models which may be employed in studying the levels of satisfaction of various members of the construction supply chain (Walker, 1995; Gable, 1996; Oliver, 1997). However, only few have been identified as being particularly applicable to the assessment of satisfaction of construction clients. There has been little published on the use of formal models of service quality and client satisfaction remains as an elusive issue in the construction sector (Gunning, 2000; Cheng and Proverbs, 2004).

Previous research has linked the client's strategic decisions with client satisfaction and project performance and has mainly focused on the procurement route (Naoum, 1994; Naoum and Mustapha, 1995; Kumaraswamy and Dissanayaka, 1998; Soetanto *et al*, 2001; Cheng and Proverbs, 2004). It is revealed that the nature of strategic decisions varies across the whole life cycle of construction projects. Issues such as, what are strategic decisions clients have to make throughout the project life cycle, and whether or not client satisfaction levels are dependent on project stages, have yet to be addressed.

A client's strategic decisions such as the establishment of procurement strategy and the adoption of whole life cost approach during the early stages of a project have been shown to have a substantial impact on project success and client satisfaction. However, the impact of strategic decisions on client satisfaction, by nature, has not been clearly defined and yet the issue of client satisfaction remains implicit.

This research reviews the general concept of the satisfaction phenomenon and investigates models used in its assessment. It examines how construction client satisfaction is measured in practice and investigates the literature to reveal the implications of strategic decisions on client satisfaction. The conclusions represent the initial findings of an on-going research project that aims to develop a rigorous and empirical model identifying the impact of strategic decisions on client satisfaction.

GENERAL CONCEPT OF SATISFACTION

Satisfaction is difficult to define and therefore there is little consensus of the definition of satisfaction. Locke (1970) suggested satisfaction was a function of comparison between an individual's perception of an outcome and its expectation for that outcome. Levels of satisfaction achieved hence are dependent on an individual's perceptive thinking and is subjective in nature in the context of satisfaction measurement.

Churchill and Serprenant (1982) explained customer satisfaction as a function of pre-purchase expectations and post-purchase product or service performance. The pre-purchase expectation held might be conscious, active or sub-conscious, passive expectations.

Customer satisfaction is a value dependant phenomenon whereby value is the ratio of perceived quality relative to price (Zeithaml, 1988). Quality is often seen as an antecedent of customer satisfaction (Fornell, 1992). Customer service literature shows that a customer's expectations and perceptions of performance levels have a direct effect on customer satisfaction and an indirect effect through disconfirmation.

Oliver (1997) found that consumer satisfaction has three variants, i.e. satisfaction with individual elements of product and service delivery, final outcome satisfaction and satisfaction with satisfaction. It was further defined that satisfaction was the consumer's fulfilment response and was a judgement that a product or service

provided pleasurable levels of fulfilment. A satisfaction judgement hence involves a comparison between an outcome and a comparison reference.

Satisfaction is a complex phenomenon because it concerns psychological issues within individual human beings and its complex latent nature makes it very difficult to measure (Oliver, 1997). From the earliest human existence, satisfaction has been a main concern of human beings. It is evident in the pursuit of personal achievement, recognition and future development.

The presumption that a customer's pre-purchase expectations determine customer satisfaction is based on the assumption that the expectations are formed on the basis of past experience. In cases where customers have no experience, customer expectations are believed to be more an artefact of the service production process and to have no effect on satisfaction (Gable, 1996). There are two general conceptualisations of customer satisfaction; these are transaction-specific and cumulative satisfaction. Cumulative customer satisfaction is based on current experience, past experience and all anticipated future experience.

Fornell (1992) suggested that loyalty was one of the key benefits of customer satisfaction as loyal customers could create a steady stream of future cash flow for a firm. The greater the satisfaction the more willing the customer will be to pay for the benefits and to tolerate any price increases from the service provider. This principle has great potential to be applied to the construction sector. Satisfied construction clients are more likely to recommend partnerships, strategic alliance and long-term relationships for their service providers (e.g. contractors and consultants etc) thus in turn promoting their image and reputation.

THE RELATIONSHIP WITH PERFORMANCE

There exists a relationship between performance and satisfaction in the context of performance assessment (Oliver, 1997; Soetanto *et al*, 2001). Performance outcomes are the input and levels of satisfaction are the output. Between the input and the output, a psychological processing exists. This psychological process is subjective and difficult to interpret and hence satisfaction is regarded as an internal frame of mind, tied to mental interpretations of performance levels (Oliver, 1997).

Smith *et al* (1969) argued that satisfaction could be specifically defined as a function of the perceived characteristics of a performer in relation to an assessor's frame of reference - defined as the internal standards an assessor uses, which could be different from one assessor to another subject to their professional background. Expectations and experiences also played important roles in providing the relevant frame of reference.

An assessor's satisfaction attributes are likely to have an impact on the assessment of performance. These attributes are mainly concerned with individual background, experience and perceptions. Experience may influence an assessor's judgment of performance, i.e. satisfaction, in two ways. The greater the experience, the more alternatives the assessor will have to compare the current performance. Individual background may cause bias introduced in the assessment and consequently may influence their levels of satisfaction. These satisfaction attributes capture an assessor's perceptions based on his experience in relevant projects.

SATISFACTION ASSESSMENT MODELS

A few assessment models have been acknowledged in the means of identification of satisfaction measurement criteria. However, few of them are particularly applicable to the assessment of construction client satisfaction.

Disconfirmation Model

A developed Disconfirmation Model demonstrates how customer satisfaction is affected by the combination of the performance of the good /service and the customer's level of expectation (Parasuraman et al., 1985; Anderson *et al.*, 1994). Satisfaction is therefore a function of the difference between performance and expectations.

There are various models available for measuring of perceived service quality such as SERVQUAL approach, which consists of several determinants of perceived service quality including tangible, reliability, responsiveness, assurance and empathy etc. (Parasuraman et al., 1985). Perceived service quality relates to the gap between customer expectations and perceptions of performance. The services provided to the customer provide varying degrees of satisfaction for the recipient at the end. Disconfirmed expectations predominate the degree of customer satisfaction with a particular service.

Where the performance that a customer perceives is deemed to be greater than the expectations held, satisfaction will increase. A perceived performance that is lower than the customer's level of expectation will result in a decrease in satisfaction.

However, the Disconfirmation Model focused on the negative aspects of expectations rather than on the positive. It actually suggested that those involved in managing customer expectations should try to lower expectations. A service provider who manages customer expectations in this way could also inadvertently lower performance levels. The end result would then be lower levels of customer satisfaction.

Spreng and Mackey (1996) found that the notion of satisfying a customer's need and desire is fundamental to the marketing concept. However, this fundamental idea is not sufficiently taken into account by the Disconfirmation Model, nor does it utilise it as a determinant of satisfaction. The satisfaction processes with services may be different from those of goods and so the Disconfirmation Model may not be appropriate for the evaluation of a service, e.g. construction services provided by contractors/consultants to a construction client (Jayanti and Jackson, 1991).

Multi-dimensional model

Gable (1996) developed a multi-dimensional model empirically through a series of case studies and a survey of clients and consultants to assess client satisfaction when engaging an external consultant to help with the selection of a computer based information system. The descriptive model identified six important dimensions of success. Dimensions comprised both three objective measures i.e. acceptance of consultants' recommendations, improvement of clients' understanding and consultants' performance and subjective measures that applied to each of the three areas in the form of the client's level of satisfaction.

The multi-dimensional model was recognised as most appropriate for application to the construction client - project manager relationship (Gunning, 2000). The subjective dimensions were proven to have the highest association with and influence on the

perception of overall satisfaction and the objective dimensions however had a limited influence on and association with satisfaction. However, the model itself failed to examine how client satisfaction could be improved through the process of assessment.

SATISFACTION MEASUREMENT IN PRACTICE

Satisfaction is widely viewed as involving perceived service quality. The level of satisfaction is also related positively to the service quality and service quality gap (Siu, *et al.*, 2001). By adopting a SERVQUAL approach, Hoxley (1998) investigated the impact of competitive fee tendering on the service quality of construction consultants to determine relationship with client satisfaction. It revealed that quality was perceived to be higher when clients took care of pre-selection of tenders and adequate weighting was given to ability in the final selection process.

Client satisfaction with the performance of construction consultants, i.e. chartered surveyors, architects and engineers, on construction projects can now be measured by assessing key performance indicators (KPI) in the UK construction industry (RICS, 2004; CE, 2005). KPIs for construction projects have become a familiar tool for measuring the success of schemes.

Under the framework/concept of client satisfaction, the measurement of satisfaction plays a core role. The criteria adopted in the measurement of client satisfaction comprise various aspects of service providers' performance and their characteristics such as profitability, productivity and repeat business etc. The key indicators of measuring client satisfaction are illustrated in Figure 1 as below:

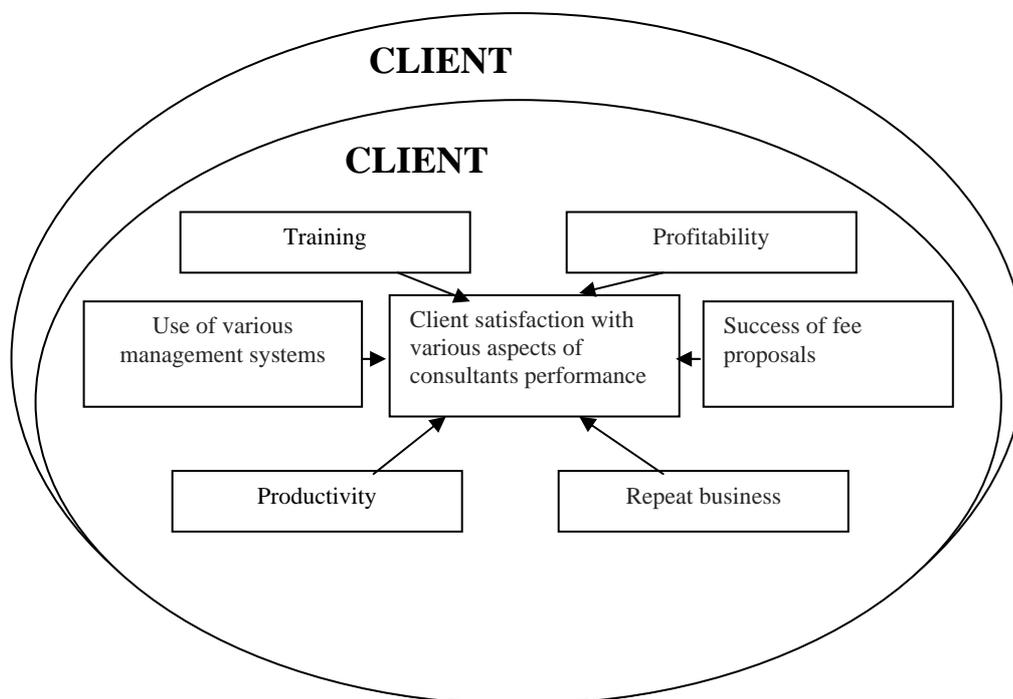


Figure 1. Client satisfaction measurement criteria (RICS, 2004)

It was suggested that client satisfaction grows significantly in relation to the performance of construction consultants in terms of understanding and responding to clients' needs (RICS, 2004).

BSRIA (2003) developed a pragmatic model for client satisfaction assessment which identified core aspects that will be assessed for Mechanical & Electrical (M&E) contractors by interviewing 20 of their most recent clients. The methodology adopted in this model revealed that companies in the construction industry chose interviews as the main means of collecting KPI data, and twenty of most recent clients will be sufficient for a basic client satisfaction study for most companies as research suggested that many firms complete around twenty large projects per annum. The model itself also tied in with the client satisfaction KPIs.

Core aspects of contractor performance from overall design to predictability of cost are identified and measured against client satisfaction levels which is demonstrated in Figure 2 as below:

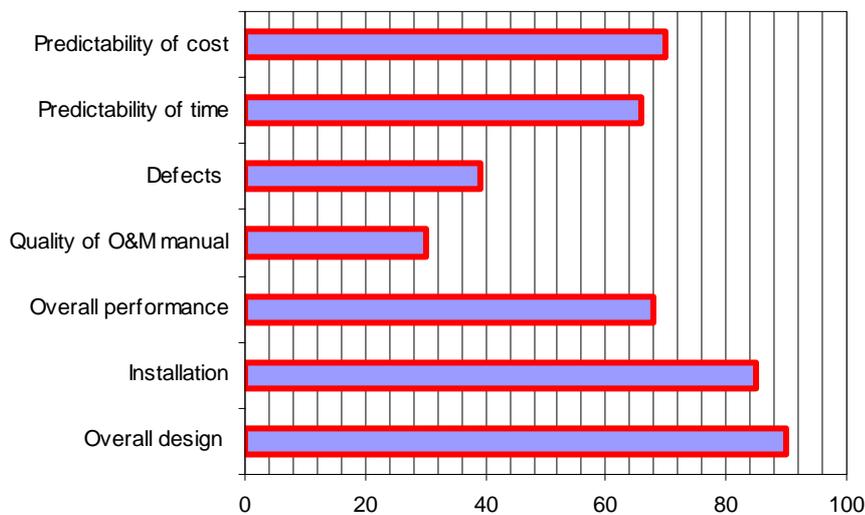


Figure 2. Client satisfaction - M&E contractor performance KPI (BSRIA, 2003)

The model provided clear benchmarking of contractors' performance against peer group i.e. major competitors in the very aspects of service that are most important to them and to satisfy their clients' needs.

However, there is often a mismatch between how a client perceives the service provider i.e. the M & E contractor and how a service provider thinks their performance on a project. Furthermore, client satisfaction measurement often goes beyond the objective aspects i.e. contractor performance and it considers the feeling of the assessor i.e. the satisfaction levels of the client, which by nature is dependent on the assessor's background e.g. experience and size etc and hence is considered subjective. Therefore, independent feed back from various clients on a range of projects which will identify areas of strength and potential weakness need to be addressed in this model.

Soetanto and Proverbs (2004) developed intelligent models to predict levels of construction client satisfaction using the artificial neural network technique based on the view of clients 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:

- Quality of service and attitude of contractor

- Main performance criteria and completion
- Performance in preliminary stage
- Performance of site personnel
- 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 client satisfaction. It 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 client satisfaction levels.

However, the models failed to make efforts to identify practical measures and recommendations which could be developed to enhance client satisfaction levels, and in the context of project life cycle, corrective actions which could be taken to remedy problems in different stages to ensure predicted client satisfaction levels can be achieved.

It was proven that understanding client needs and responding to their needs are identified as the most important criteria adopted in client satisfaction measurement. Moreover, satisfaction levels are dependent on performance attributes and subjectivity is to some extent prevalent in the context of satisfaction measurement. The variety of clients' characteristics e.g. their sizes and experience will also have significant impact on their satisfaction levels (Chinyio *et al*, 1998; Soetanto and Proverbs, 2004).

STRATEGIC IMPACT

Clients' needs play a vital role in the strategic decision-making process, as they are the basis upon which clients will judge their satisfaction with project outcomes. Clients' needs are often multiple and different decision-making techniques require different techniques for scoring clients' goals. A client's strategic decisions in preliminary stage such as the procurement of long-term partnership, strategic alliance etc. may encourage better performance of service providers (Soetanto and Proverbs, 2004) and hence have a positive impact on its own levels of satisfaction.

Macmillan *et al* (2001) also highlighted that decisions taken at the conceptual design stage of a building project can significantly reduce costs and increase client satisfaction. It's critical to make the correct strategic decisions in the early stages, as it becomes increasingly expensive and unrealistic to make any significant changes as design progresses (Bartolo, 2002). As a consequence, it may be difficult at later stages to take any corrective actions to satisfy clients' needs and hence enhance the levels of client satisfaction.

Cheng and Proverbs (2004) found that strategic decisions made by a client throughout the project life cycle could be broadly categorised as a few functioning groups based on the timing and the subject of the decisions. The categories consist of procurement strategy, cost management approach, people issues and life cycle strategy. Strategic decision-making process in different stages comprises project priority analysis, identification of the direction for the future of a project and high level planning of the implementation. Consequently the impact of the decision on client satisfaction depends as much on timing as on the subject of the decision (Cheng and Proverbs, 2004).

Further in-depth research focusing on the significance of strategic impact on client satisfaction across the project life cycle is recommended through an on-going research project that aims to develop a rigorous and empirical model identifying the impact of strategic decisions on client satisfaction.

CONCLUSION

This research has reviewed the general concept of the satisfaction phenomenon and models used in its assessment. Construction client satisfaction is measured in practice by a series of criteria and is presented by the means of key performance indicators. Understanding and identification of, and responses to client needs are identified as the most important criteria adopted in the measurement of client satisfaction. Clients' strategic decisions at preliminary stage such as method of procurement have significant impact on their satisfaction levels. The impact of strategic decisions on client satisfaction depends as much on timing as on the subject of the decision.

Further research of the significance of strategic impact on client satisfaction across the project life cycle is recommended.

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