TOTAL QUALITY FACILITIES MANAGEMENT AND INNOVATION: A SYNERGISTIC APPROACH

ABSTRACT

The ideas of quality and performance management and innovation in facilities management service provision are not new. Total Quality Management (TQM) is widely recognised throughout the world as a concept capable of providing competitive advantage. Innovation has also received considerable attention as having a crucial role in securing sustainable competitive advantage. However, there has been little consideration of the potential for integration of TQM practices with innovation principles in determining facilities management performance. TQM and innovation appear to corroborate each other and are becoming increasingly important in facilities management. This study takes a theoretical approach to critically review the relationship between TQM and innovation and to determine the relationship between TQM and Innovation in regard to facilities service provision. The theoretical implication is that FM service providers may adopt a synergistic approach to TQM and innovation, leading to sustained competitive advantage in terms of better positioning themselves within the saturated FM marketplace.

Keywords: TQM, innovation, performance management, service provision

INTRODUCTION

The recognition of Total Quality Management (TQM) as a management concept capable of providing competitive advantage is widespread around the world. Innovation has also received considerable attention as having a crucial role in securing sustainable competitive advantage. Facilities management is considered to be a strategic management function and as such, is now focusing considerable attention on the areas of quality management and innovation.

Innovation and TQM appear to corroborate each other and some companies have adopted both TQM and innovation processes with a view to competing favourably in increasingly competitive markets. However, little previous research has considered synergistically integrating TQM and innovation and whether this would be advantageous, or even imperative, for facilities management providers wishing to survive the current market.

This paper takes the form of a critical review of previous research in the area to take a view as to whether a synergistic approach would be possible in facilities management. Challenges around this are centred on the fact that previous studies have indicated different views around any relationship. The review concludes that it may be advantageous for FM providers to adopt this approach but further empirical evidence is required to validate this theory.

QUALITY AND PERFORMANCE IN FACILITIES MANAGEMENT

Quality management techniques have been used with great success in the manufacturing industries for many years. For example, in Japan the cornerstone of the success of Japanese industries since the 1950s was their absolute belief in Total Quality Management (TQM), an obsession with giving the customers what they want and continually striving for improved performance (Grigg, 1996).

However, the manufacturing industry differs from facilities management in that it produces tangible products in large batches via repeat processes, whilst FM projects are mainly undertaken in single batches and the product is not necessarily a tangible item, it may be a service or a process (Pheng, 1996). For example, a manufacturing process may produce cars, shoes or components, while a FM service may produce a productive workplace.

The value to be gained through a total quality approach is increasingly being recognised in business (Alexander, 1996), including the construction industry, which is similar to FM in that quality is difficult to measure (Yasamis et al., 2002). Attempts have also been made to apply TQM to service industries such as hotel and catering (Pheng, 1996). Over the last decade attempts have been made to relate TQM to facilities management.

There is now pressure for change and improved quality in FM which has come from external sources by well-informed clients (Pheng, 1996) and consumers are now better able to give clear objectives to service providers (Aatsalo-Sallinen, 2006). Quality management is, therefore, essential to the FM industry in order to be competitive and to maintain the identity of FM as a key strategic business tool.

For TQM to be successful there must be support for the concept from top-level management, which must act as a facilitator in what is an enabling process (Grigg, 1996). It must, however, include all people at all levels and in all functions (Pheng, 1996).

With increasing competition among FM service providers, it is essential for providers to implement quality management processes to continue to meet and exceed expectations in order to differentiate their product in an increasingly service saturated market. Many service providers are moving towards a diverse range of services and organisations that have traditionally offered specialist services are now becoming general facilities management organisations. The question of the subjective nature of value and the consequential need for a bespoke service offering within FM is therefore of paramount importance.

FM can contribute to the performance of organisations in a number of ways, which include strategy, culture, control of resources, service delivery, supply chain management and change management (Amaratunga and Baldry, 2002).

The constructs of performance measurement in facilities management are neither well-established nor standard (Amaratunga, 2000). The approach to performance measurement in FM has historically tended to concentrate on financial measures, then broadening into an emphasis on customer satisfaction and quality as it was acknowledged that financial measures are inadequate for demonstrating workplace effectiveness (McDougall and Hinks, 2000). Modern business requires dynamic measures that motivate continuous improvement in critical areas such as customer satisfaction, flexibility and productivity (Varcoe, 1993). However, to use performance assessment effectively, FM needs to make the transition from measurement to management (Amaratunga and Baldry, 2002).

Facilities management service providers and in-house FM teams should implement quality and performance management initiatives in order to measure their current position and bring about future improvements. However, it is also possible that they could look to a synergistic approach between quality management techniques and innovation processes.

SYNERGIES BETWEEN TQM AND INNOVATION IN FACILITIES MANAGEMENT

The first point to note is with regard to positioning facilities management as a strategic discipline. FM is known to be responsible for buildings and services supporting businesses. However, Noor and Pitt (2009) argue that this view does not consider the holistic perspectives of the corporate world in that effective FM encompasses multiple activities under various disciplines, combines resources and is vital to the success of any organisation. FM can bring value in terms of organisational effectiveness through managing and improving services, as well as innovation in service management.

In recognising the strategic aspects of FM, comparisons can be drawn with innovation and quality management. Alexander (1996) argues that FM focuses resources on meeting user needs to support the key role of people in organisations and strives to continuously improve quality. This supports Oakland's (2003) view of quality, which is simply meeting customer requirements and Atkin and Brooks (2009) consider that, even within in-house arrangements, internal departments must be considered as customers of the FM service and their needs served accordingly.

Likewise, it could be argued that innovation is about exceeding customer expectations. Tidd and Bessant (2009) point out that the pattern of competitive advantage is increasingly favouring those organisations that can mobilise knowledge, technological skills and experience to create novelty in their product or service offerings and in the ways they create and deliver these offerings.

Alexander (2003) suggests that FM emerged as a response to the business environment as companies embraced new technologies, sought competitive advantage and recovered from challenging business times at the same time as requiring to trim overheads, operate more efficiently and "delight" their customers. Perhaps, therefore, FM service providers should look to their quality management system to meet customer requirements, in conjunction with innovation to go beyond expectations.

Many definitions of FM such as Tay and Ooi (2001) consider that FM plays a supportive role in enhancing the performance of a firm and in contributing to business objectives (Kaya et al., 2004). Becker (1990) considers that FM can enhance the organisation's ability to compete successfully in a rapidly changing world whilst Alexander (1996) points out that the facilities manager acts on strategic demands, developing plans in line with the corporate strategy. Clearly this is in agreement with Tidd and Bessant's (2009) assertion of innovation contributing to competitive advantage. Customer focus, continuous improvement and empowerment are three management concepts which are at the heart of TQM and innovation and will help organisations to compete.

Noor and Pitt (2009) argue that innovations do not occur through one person's individual act, but as a result of a complex set of processes requiring the efforts of many individuals. Therefore, if service delivery is to be innovative, it needs to be clearly managed as a set of processes by creative people. Cardellino and Finch (2006) found that innovation management is active although there was a lack of an identifiable systematic process. In relation to quality management, it is recognised that for organisations to perform well, they need good process management because underperformance is primarily caused by poor processes (Oakland, 2003). Process management, as a central theme of TQM, is therefore highly relevant to the management of innovation in FM.

However, although there are clear linkages between facilities management as a profession and the concepts of TQM and innovation, it is not clear whether innovation and TQM can be synergistically applied within facilities management. There is little research in this area with a specific focus on facilities management although the following section considers it from a general perspective.

THE RELATIONSHIP BETWEEN TQM AND INNOVATION

Conflicting arguments exist regarding the relationship between the principles of Total Quality Management (TQM) and innovation (Prajogo and Sohal, 2001). Companies accepting TQM into their structures and systems may be able to provide an appropriate environment to nurture innovation due to the congruence of principles across the two disciplines (Dean and Evans, 1994; Kanji, 1996; Mahesh, 1993; Roffe, 1999; Tang, 1998).

Nowak (1997) emphasised the importance of innovation and quality management strategies and stated that both are processes that lead the company towards competitive advantage. He also established a link between innovation and TQM as a common organisational platform that facilitates sharing of knowledge and skills.

Customer focus is one of the integral components of TQM and it encourages organisations to search for new customer needs and expectations, therefore, leading organisations to be innovative with regard to introducing new products to meet the changing needs of markets (Juran, 1988). Ojelabi and Smith (2012) also make the point that continuous improvement encourages change and creative thinking in the organisation of work and that empowerment, teamwork and involvement are also substantial in determining the success of organisational innovation. Oakland (2003) argues that the way people are managed and developed at work is becoming recognised as one of the primary keys to improved organisational performance and that world class organisations value and invest in their people through principles such as these.

According to authors such as Flynn et al. (1994) and Baldwin and Johnson (1996), the implementation of a TQM system could foster the innovation process in companies due to TQM elements such as continual improvement or customer focus. Their assertion is that companies combining TQM and innovation processes stand to have competitive advantage and a higher chance of survival.

Continuous improvement is another key element of TQM and this will often cause companies to change, which may be reflected in the development of new products, services and processes (Singh and Smith, 2004).

Pfeifer et al. (1998) identified three subject areas of importance in innovation as follows:

(1) Customer orientation and service: one must see through the eyes of customers;
(2) Flexible organisational structures;
(3) Creative staff: a favourable environment and freedom.

These points appear to be aligned with the principles of TQM. For example, the framework put forward by Flynn et al. (1994) includes customer orientation as a key point of TQM. Ojelabi and Smith (2012) also consider that TQM promotes empowerment and implicates employees in continuous improvement, which could support a creative staff, and flexibility is also important as a requisite to quickly adapt to customers.

Prajogo and Hung (2008), based on a study of Korean manufacturing firms, also showed the effectiveness of TQM in a research and development environment and that it can be applied and adapted as a set of generic principles in environments other than manufacturing or production areas.

Martinez-Costa and Martinez-Lorente (2008) also found clear evidence of TQM promoting innovation. They discovered that companies which applied TQM and developed organisational innovation gained greater benefit than companies that do not. They concluded that the managerial implications are that companies that operate where continuous innovation is a necessity should see TQM as a means of quality improvement but also as a technique to facilitate the innovation process.

However, several researchers, such as Slater and Narver (1998) and Wind and Mahajan (1997), have rejected the idea of a positive relationship between TQM and innovation on the basis that it retains principles and practices which could be detrimental to the implementation of innovation.

These authors are in agreement that the philosophy of customer focus could lead organisations to focus purely on incremental improvements in products and services rather than striving for innovative solutions. The danger is that products or services may be developed which are very similar to those of the organisation's competitors due to a focus on benchmarking customer preferences (Ojelabi and Smith, 2012).

It is possible that customer focus could potentially lead to a "tyranny of the served market" whereby managers see the world only through the eyes of their current customers, failing to explore latent needs and thereby leading to failure to drive generative learning through the search for the unserved and untapped potential in markets (Ojelabi and Smith, 2012).

Standardisation is necessary for conformance and the reduction of errors but it has been argued that it could result in rigidity from the innovation point of view as it may trap people into staying with what is workable (Glynn, 1996; Kanter, 1983). It has also been suggested by Lawler (1994) and Samaha (1996) that continuous improvement is aimed at simplifying or streamlining a process, which may be detrimental to innovation as organisations may continually improve processes which are fundamentally flawed.

Perhaps it is also difficult to achieve rapid innovation concurrently with product quality and Samaha (1996) argues that organisations focussing their strategy on frequent and fast innovations will have inadequate time to learn about the processes in order to achieve a high level of quality conformance.

There are few studies that analyse the relationship between TQM and innovation empirically. Prajogo and Sohal (2003) sampled 194 Australian companies and found that TQM had a positive influence on quality and innovation performance. However, Singh and Smith (2004) did not find a firm link in a wider sample of Australian manufacturing firms. A Spanish study (Martinez-Costa and Martinez-Lorente, 2008) did find a positive link although their sample is only comprised of 102 companies in the machinery and measurement instrument sectors.

Prajogo and Sohal (2001) carried out a detailed analysis of the possible effect on innovation of implementing a TQM system and a summary of this is shown in table 1.

Table 1: Relationship between TQM and innovation

Argument in support of a positive relationship	Argument in support of a negative relationship
Customer focus: encourages organisations to search consistently for new customer needs and expectations.	TQM can 'trap' organisations into improvement or incremental innovations.
Continuous improvement: encourages change and creative thinking in how work is organised and conducted.	TQM can lead organisations to be 'narrow-minded'. They define the "tyranny of the served market" as only seeing the world through current customer eyes.
Empowerment: involvement and teamwork.	Based on the issue of risk avoidance and adaptive approach, TQM could strategically lead organisations to be imitators or followers rather than innovators or leaders.
	TQM could hinder creativity due to the enforcement of standardisation or formalisation.
	TQM promotes single-loop learning rather than double-loop learning.
	From a strategic point of view, TQM focuses on cost efficiency that could limit the capacity and opportunity for innovation.

Adapted from Martinez-Costa and Martinez-Lorente (2008)

In a competitive environment, product and service innovation are necessary to surpass competitors in terms of customer satisfaction and it seems logical that companies implementing TQM will also make considerable effort in innovation. However, it has been argued (Ojelabi and Smith, 2012) that the innovative company must manage key elements in the innovation process effectively to succeed and ensure adequate organisational support. This idea could be the TQM system.

Although it is difficult to take a decisive view based on these findings, given the importance of innovation and quality management to company survival in a competitive market, further study of this relationship is highly relevant in facilities management.

CONCLUSIONS

This paper has reviewed the role of quality and performance management in FM and argues that quality management is essential to the industry to be competitive and to maintain the identity of facilities management as a key strategic business tool. With increasing competition among providers, quality management processes can enable product differentiation in an increasingly saturated market.

Likewise, when FM is recognised as a strategic support service, there appear to be several similarities and linkages between FM quality management and innovation. Facilities management and quality management can be regarded as meeting customer requirements, whilst innovation takes this further to go beyond customer expectations. Facilities management plays a pivotal role in enhancing firms' performance, which has been shown to be aligned with the principles of TQM and innovation.

Varying views were uncovered as to any relationship that exists between TQM and innovation. Arguments in support of a positive relationship are centred on the assumption that companies embracing TQM into their systems and culture will provide an environment for innovation success due to congruent principles between TQM and innovation. However, other researchers reject the idea of a positive relationship with the view that TQM could be detrimental to innovation. These opposing arguments can be extended to consider the relationship between quality performance and innovation performance as well as TQM practices, quality and innovation to determine any positive relationship.

It seems logical to consider that due to the linkages between innovation and quality managed facilities, companies implementing TQM will also employ innovation techniques. Given the importance of innovation and quality management in the current market, the study of this relationship within facilities management is highly important. However, currently taking a decisive position based on these findings is difficult and further empirical research is required in this regard. It does seem possible that FM service providers could potentially adopt a synergistic approach to TQM and innovation, leading to sustained competitive advantage.

What is proposed in terms of further research is a structured survey of staff members within various market leading facilities management service provider companies to establish the approaches to TQM and innovation within these organisations. As TQM is an all-encompassing approach flowing from leadership level to junior levels, the survey should aim to target all organisational levels.

Different researchers have used structural equation modelling to examine the relationship between TQM and innovation and it is suggested in this case that an integrated model of quality and innovation management such as that developed by Prajogo and Sohal (2006) could be employed to measure quality and innovation management practices within the facilities management context.

If the results suggest a positive relationship between quality management and innovation in the FM context, the intention would be to create a framework enabling FM organisations to implement an integrated innovation and quality management system following similar principles to those of the International Organisation for Standardisation (ISO). Therefore, it is suggested that an extensive research study in this area is required.

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