

Total Quality Management and its Impact on the Level of Customer Focus within Construction Project Management in Ghana

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ABSTRACT: *The purpose of this paper is to study the link between TQM and the levels of internal and external customer focuses in project management practices among construction firms in Ghana. In specifics, the study looks at the relationship between the existence of TQM policy and frequency of customer complaints and participation of employees in designing quality management schemes. The study was both inferential and descriptive survey of 50 respondents, based on literature review and investigative approach, using questionnaires. A multi-sampling technique (namely stratified random and convenience sampling techniques) were employed. SPSS statistical tool was utilized for data analysis. It is uncovered that, 68% of the construction companies had TQM policy. Both companies with or without TQM policies were both customer and employee focused. However, the Chi Square test indicated that there is no impact of TQM on customer focus and employee focus among these companies. It is recommended all construction companies should equip their project management team to understand and use knowledge and skills from at least five areas of expertise: The Project Management Body of Knowledge (PMBOK); Application area knowledge, standards, and regulations; Understanding the project environment; General management knowledge and skills and Interpersonal skills. Again, they should have and always update themselves with the following project management competence: Project Management Knowledge Competency); Project Management Performance Competency; and Personal Competency. This paper brings together three distinctive areas of research and scholarship (namely TQM, customer focus and employee focus)*

KEY WORDS: *Customer satisfaction, Customer complaints, Employee satisfaction, Employee retention, Total Quality Management (TQM)*

I. BACKGROUND OF THE STUDY

The activities, processes, and practices of most construction companies are mainly project-based, which are normally temporary endeavors embarked upon to achieve a unique product, service or results. Successful project management can then be defined as having achieved the project objectives within time, cost, at the desirable performance or technology level, whereas utilizing the assigned resources effectively and efficiently with acceptance by the customer.

Among the key principles of total quality management (TQM) is customer focus, thus customer requirements must be met first time every time (BSI, 2000; Stevenson, 2007). The success of an organization depends on how well the organization understands its customers and meets their needs. For all business entities, there are two categories of customers: the internal customers (being the employees) and external customers (the final consumer or user of a product or/and service). Price and Chen (1993) define TQM as a management system, not a series of programs that puts customer satisfaction before profit. It is a system that comprises a set of integrated philosophies, tools and processes used to accomplish business objectives by creating delighted customers and happy employees.

Internal customers or employees constitute a crucial component of TQM implementation, and it can dictate the difference between being competitive and going under. Employees hold the future of the company in their hands. Employees, most of the time are knowledgeable about the needs of the customer and identify quality problems for solutions. Employee satisfaction drives loyalty and satisfied employee stay. Thus, employee retention is assured thereby reducing labour attrition. Again, satisfied employees are ambassadors for their respective firms. Loyal employees are productive employees who create values of companies.

Obviously cost of turnover includes recruiting, hiring and training which reduces as a result of employee loyalty. Satisfied external customers are loyal customers who avoid creating terrorists for business entities. It is estimated that a relatively small increase in customer loyalty can yield a proportionately huge profit increases (Reichheld, 1996; Drucker, 2009). Acquiring new customers cost money and very expensive. In addition, loyal external customers give free advertising. They are pertinent to commercial success of business organizations which are good ingredients their survival, future investment, growth, longevity and for creating value for owners. The purpose of paper is to explore the impact of total quality management programme on the levels of (both internal and external) customer focus in construction project management practices in Ghana.

II THE RESEARCH PROBLEM

Establishing the contributing factors of effective project performance has been one focus of project management research such as the success criteria (Cooke-Davies, 2002), the critical success factors (Daniel, 1961; Rockart, 1979 in Bryde and Robinson, 2007), project performance in terms of the “iron/golden” triangle (Atkinson, 1999; Gardiner and Stewart, 2000) which is still applicable for measuring project performance (White and Fortune, 2002). Again, the Operations Management research focus has been on the link between operation practices and organizational performance such as the impact of just-in-time practice and performance (Fullerton et al, 2003), the effect on performance by total productive maintenance approach (McKone, Schroeder and Cua, 2001), influence of TQM practice on performance (Hendricks and Singhai, 2001; Shieh and Wu, 2002, Kaynak, 2003). Considering the focuses of both project and operations management research, there is limited research specifically focused on project environments. One area that has received no attention in the studies is the impact of TQM practices on the levels of (both internal and external) customer focus within the project management practices. There is the need for research into the link between TQM and levels of (internal and external) customer focus in project management practices.

III RESEARCH OBJECTIVES

The main objective of this work is to study the link between TQM and the levels of internal and external customer foci in project management practices among construction firms in Ghana. In specifics, the study looks at the relationship between the existence of TQM policy and frequency of customer complaints and participation of employees in designing quality management schemes.

Hypothesis

To achieve the objectives of this study in the context of the influence of TQM on customer complaints frequency and participation of employee in quality management schemes as proxies for the project management practices of the contacted construction companies, the following hypothesis was developed:

H1: Respondents working in companies with a recognized TQM scheme are likely to be employee focused in their project management practices than respondents in companies with no recognized TQM scheme.

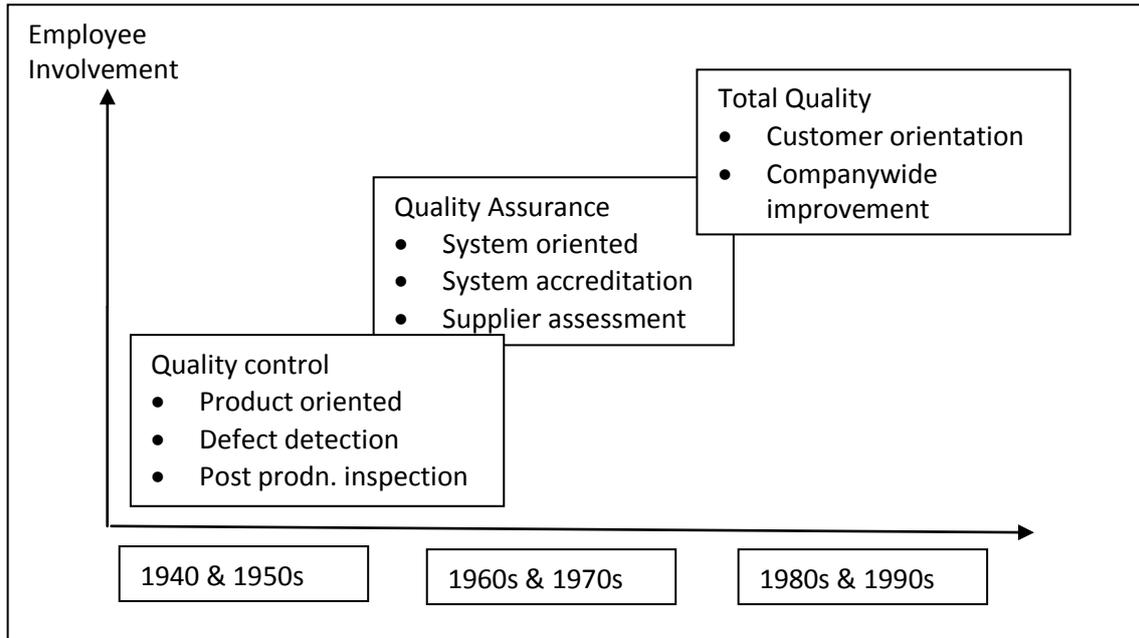
In the context of the influence of TQM on the (external) customer satisfaction (using participation of employee in quality management schemes as a proxy) in the project management practices of the contacted construction companies the following hypothesis was developed:

H2: Respondents working in companies with a recognized TQM scheme are likely to be customer focused in their project management practices than respondents in companies with no recognized TQM scheme.

IV LITERATURE REVIEW

Total quality management (TQM)

TQM is defined in many ways and there is little agreement on what TQM really means, though the concept has gained much attention in recent years. One reason for the confusion might be that many different terms are used when discussing this topic, such as “total quality improvement”, “total quality control”, “companywide quality control”, and “strategic quality management”. The different, if any is often unclear and generates confusion (Leonard and McAdam, 2002; Hellsten and Klefsjo, 2000). Hellsten and Klefsjo further believe that there are several reasons for the different opinions about TQM. One is that the gurus, who often seen as the father and mothers of TQM, do not like the concept. Another reason is that there are several similar names for roughly the same idea. A third one, which they deem most severe, is that there are many vague descriptions and few definitions of what TQM really is (*ibid*).



Source: Himanshu, 1999

According to Stevenson (2007), “the primary role of management is to lead an organization in its dairy operations and to maintain it as a viable entity into the future” and quality has become one of the driving forces of these two objectives. Though customer satisfaction became a specific goal in late 1980s, providing high quality was recognized as a key element for success. In addition, he defines TQM as “a philosophy that involves everyone in an organization in a continual effort to improve quality and achieve customer satisfaction” (*ibid*).

TQM can be defined as a systems approach to ensure quality in an organization. In other words, TQM means that the organization's culture is defined by and supports the constant attainment of customer satisfaction through an integrated system of tools, techniques, training among others (Himanshu, 1999). He stressed that TQM involves the continuous improvement of organizational processes, resulting in high quality products and services. TQM programs are planned and managed into systems and are oriented towards the achievement of complete customer satisfaction. In simple terms, he define TQM as the system of activities directed at achieving delighted customer, empowered employees, higher revenue and low costs (*ibid*). According to Vouzas and Psyhogios (2007) in almost all TQM definitions, a reference is made to its “soft” and “hard” side. They associated the “soft” side with management concepts and principles such as leadership, employee empowerment and customer focus, while the “hard” side refers to quality tool and techniques. Recently, the work of Fotopoulos and Psomas (2009) points out that achieving quality management is not only through leadership, employee management and involvement, customer focus, continuous improvement among other factors. But quality management is achieved through the support of quality management tools and techniques like flow chart, relationship diagram, QFD, Pareto analysis and so on. They emphasis that TQM is different from quality assurance models in terms of customer focus, employee satisfaction, the protection of natural and social environment and finally in the spheres of internal and external business results (*ibid*).

It is evident that many companies have successfully implemented TQM programs. Successful TQM programs are achieved through a number of elements coined as the features, principles or tenets of TQM. They are called core values which are also called in literature as dimensions, elements, or cornerstones (Hellsten and Klefsjo, 2000). It is belief that if they are not present, TQM will become just another fad that quickly dies and fades away (Stevenson, 2007).

Features of TQM: Customers form the first orientation of TQM. The following slogans for TQM programs; “the customer defines quality”, “the customer is always right”, “the customer always comes first”, “the customer is king”, “quality begins and ends with the customer” to mention a few, show the extent to which TQM schemes are customer focus. Customer focus is one of the eight quality management principles that form the basis of the latest version of ISO 9000 (Stevenson, 2007).

Again, the TQM approach outline by Stevenson (2007) supports the fact that TQM is customer focus. This approach is describe as follows: find out what the customer wants; design a product or service that meets or exceeds customer wants; design processes that facilitates doing the job right the first time; keep track of results and extend these concepts to suppliers (*ibid*). Focusing on both internal and external customers needs or understanding the customers is the driving force behind TQM schemes (Stevenson, 2007; Himanshu, 1999). Both authors classify quality function deployment (QFD) as a critical customer attributes identification tool, that links customer attributes and design parameters.

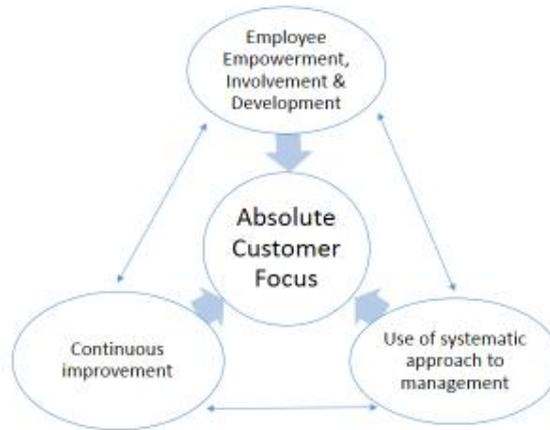
This is described by Stevenson (2007) as a philosophy of seeking improvement to all factors related to the process of transforming inputs into outputs on an ongoing basis. This involves all inputs such as men, money, machine, materials and methods. TQM is the management process used to make continuous improvements to all functions. TQM represents an ongoing, continuous commitment to improvement. The foundation of total quality is a management philosophy that supports meeting customer requirements through continuous improvement. Stevenson (2007) claims that

TQM as a concept was not new, but it did not receive much popularity in the United States of America for a while, nevertheless it originated from there. However, many Japanese companies utilized it for years and turn out the cornerstone of the Japanese companies approach to production. And the Japanese use the term “Kaizen” to refer to continuous improvement and it is one of the quality management principles of ISO 9000. Leonard and McAdam (2002) describe continuous improvement as one of the terminologies use by quality manager in referring to TQM results and further they stress that with regard to the terms used, continuous improvement is most popular which implies an operational, rather than strategic, focus for TQM.

This involves identifying other organizations that are the best at something and studying how they do it to learn how to improve your operation. The companies need not be in the same sector of business (Stevenson, 2007). He describes further the benchmarking process as follows: identify a critical process that needs improving, identify an organization that excels in this process, contact that organization, analyze the data and finally improve the critical process (*ibid*). It is seen as one of the critical tools for TQM as indicated by Fotopoulos and Psomas (2009). Employee empowerment is identified as one of the major principles of TQM. It is about giving employees the responsibility for improvement and the authority to make changes, which provide strong employee motivation (Stevenson, 2007; Lau and Tang, 2009). It is also about employee engagement which can take the following forms: employee surveys, focus groups discussions, staff training, staff empowerment, team work, suggestion system, participative management approach and reward and recognition schemes and genuine sincere involvement (Farmer et al, 2001).

Empowering employees and bringing them into the decision making process, provide the opportunity for continuous process and product improvement. Again, the untapped ideas, innovations and creative thoughts of employees can make the difference between success and failure. Competition is so fierce that it will be unwise not to use every available tool. Employee involvement improves quality and increase productivity (*ibid*). Other principles of TQM according to Stevenson (2007) include team approach-the use of team for problem solving that can promote a spirit of cooperation and shared values among employees; decisions based on facts rather than opinions; knowledge of tools-employees and managers are trained in the use of quality tools; TQM champion who promote the value and importance of TQM principle throughout the company; suppliers must be included in all quality activities and quality at the source-the philosophy of making each worker responsible for the quality of his or her work. In a form of diagram (Figure 2), Khan (2003) describes the components of TQM philosophy and their interrelationships as shown below with customer focus as the core of the components of TQM:

Components of TQM philosophy and their interrelationships



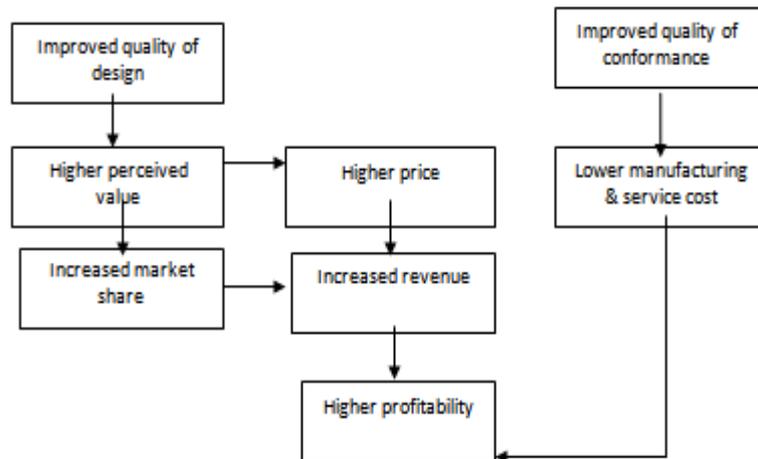
Source: Khan, 2003

In addition, Stevenson (2007), Lakhe (2006) and Ngowi (2000) outlined the following as the eight quality management principles that form the basis of the latest version of ISO 9000: customer focus, leadership, involvement of people, process approach, systematic approach to management, continual improvement, factual approach to decision making and mutually beneficial supplier relationships. Again, these principles are part of the core values of awards such as the Malcolm Baldrige National Quality award, European Quality Award and the Swedish Quality award (Hellsten and Klefsjo, 2000).

Importance of TQM

The importance of TQM is seen in many spheres. A successful implementation of TQM helps the organization to focus on the needs of the market; facilitates to inspire for top quality performer in every sphere of activity; provides the framework necessary to achieve quality performance; helps to continuously examine all processes to remove non-productive activities and reduce waste. In other words, the benefits of successful TQM include reduction of the cost of running a business; increase in market share; company morale improvement and guarantee of company competitive edge (Himanshu, 1999). These benefits can be summarized by figure 2c, which is a modification from “The Management & Control of Quality by Evans and Lindsay (*ibid*):

Quality and Profitability Relationship



Source: Modified from Himanshu (1999)

TQM is defined as a system which has components of core values, techniques and tools with the aim to increase external and internal customer satisfaction with a reduced amount of resources (Hallsten and Klefsjo, 2000). TQM is seen as a framework in which expectations of stakeholders are fulfilled (Lau and Tang, 2009; Ahmed et al, 2005). Much has been written on the impact of TQM on organizational performance. TQM is found to be a key driver in the implementation of corporate strategy. On the contrary, there is insufficient empirical evidence that TQM is a key driver during strategic decision making process. Thus, there is little evidence of close, intertwining corporate strategy and TQM (Lenard and McAdam, 2002). Likewise, Prajogo and McDermott (2005) lamented that there are conflicting views about the impact of TQM on organizational performance. They stressed that studies (like Flynn et al, 1994; Samson and Terzioviski, 1999) support positive and significant relationship in between TQM and organizational performance. However, other scholars (such as Brown, 1993; Harari, 1992; Tatikonda and Tatikonda, 1996) show that not all TQM implemented have given a satisfactory results as portrayed by its advocates (Prajogo and McDermott, 2005). In this spheres, Sun et al (2004) described TQM as an abstract with clear guidelines on its implementation. Again, Coleman and Douglas (2003) stated that TQM is too abstract with many definitions and a lack of “hard” requirement. Again, at the corporate level, Bugdol (2005) confirms that badly implemented TQM may result in increased bureaucracy and many employees dissatisfaction with TQM implementation. It was also identified that quality tools and techniques were rarely utilized in Polish companies (ibid). A recent work by Fotopoulos and Psomas (2009) summaries some current articles on TQM results as indicated (Table 2a) below. The first two results listed in the table is importance to this study as customer satisfaction and employee satisfaction form part of the key parameters under study.

Customer and employee satisfaction in project management practices: Globally, there have been an increased customer focus discussions in many sectors such as the hospitality (Pizam and Ellis, 1999); construction (see for instance Rasila et al, 2006; Wilson et al, 2001); virtual organisations (Alomain, Tunea and Zairi, 2003; Cox and Dale, 2001); marketing (Bennett and Rundle-Thiele (2004); health care (Vukmir, 2006); facility management (Campbell and Finch, 2004). Product focus is given way to customer focus since mid-1990s especially in the real estate industry (Bengtsson and Polessie, 1998) and this has affected the attitudes and strategies of many firms (Palm, 2008) as indicated earlier by Martin (2004) that company’s espoused values for customer relations has increased in real estate firms. Palm (2010) analyse how the adoption of customer focus has evolved over time in the real estate sector and concluded that particularly the Swedish real estate sector has shifted from product thinking toward customer thinking.

In the last few years, the literature on customer satisfaction reveals the following three key themes: the main enabler-type activities that appear to be linked to customer satisfaction; the link between customer satisfaction and “bottom-line” business results; and will customer satisfaction continue to be the primary focus for successful organisation in the future (Alomain, Tunea and Zairi, 2003). In terms of importance of customer focus in organisations, Fotopoulos and Psomas (2010) cited Siddiqui and Rahman (2007), showed that customer orientation and top management support constitute the key factors in yielding benefits like cost cutting, increase management control, improved quality products and services, greater customer satisfaction, enhance

productivity, slashed time consumption among others. The authors again cited Yang (2006) found that, TQM practices have positive effects on customer satisfaction, employee satisfaction and other benefits like competitive advantage, improved image (Fotopoulos and Psomas, 2010).

Extensive research has been conducted on employee satisfaction denoted by Lam (1995) as job satisfaction. He argues that TQM can affect many aspects of daily jobs of employees and their satisfaction. He also stresses that a review of empirical studies of job satisfaction indicates that good working condition lead to job satisfaction. Likewise, TQM results in an improvement in employee satisfaction (Fotopoulos and Psomas, 2010). The main hypotheses for our research are as follows:

- H1:** Respondents working in companies with a recognized TQM scheme are likely to be employee focused in their project management practices than respondents in companies with no recognized TQM scheme.
- H2:** Respondents working in companies with a recognized TQM scheme are likely to be customer focused in their project management practices than respondents in companies with no recognized TQM scheme.

V RESEARCH DESIGN

The study was a descriptive survey conducted in the stages outlined as follows. First, a literature review was conducted on TQM (and its definition, key features and importance), project management, relationships between TQM and PM. Variables and issues of TQM that influence project management were identified and were adapted for research questions and questionnaire survey.

VI. POPULATION

The population of this study consisted of the top managers of construction firms located in the Greater Accra region. Construction firms were selected based on the fact that their activities are project-based and again those in the Greater Accra were used because of information accessibility and their locations.

Sampling: The sample size of this study is 50 respondents consist of top managers. The sample is made up of adults above 30 years of age. This sample size was chosen due to financial, time and other logistics constraints. A multi-sampling technique (consisting of stratified random and purposive sampling techniques) was employed. This purposive sampling technique was appropriate as it ensures flexibility and to give quick insight in TQM, customer and employee focuses. Purposive sampling technique was used to get respondents who have access to information on the research problem to answer the questionnaire. This is intended to ensure that respondents, who are automatically liable to thesis questions, are made to give response. Stratified random sampling was also employed. The heterogeneous nature of the respondents of this study required dividing the respondents into non-overlapping homogeneous units (strata). The strata types or criteria were based on whether a respondent is from small, medium or large scale firm, and whether they are into civil, building or both works.

Research instrument: The study involves the use of two main instruments namely survey questionnaire and interview guide, of which both were designed by the researcher to collect data for the study. The instruments were piloted to check for validity and reliability and were proved to be useful. After pilot study the feedback from the respondents were analyse with the help of SPSS statistical tool. In respect of the responses given some changes were made to the questionnaire item before the final form was printed for the main data collection. In the researchers attempt to test for reliability of the questionnaire for the study a test was conducted on sample of the population. The significance and insignificance of the results indicate that the questionnaire were reliable.

Data analysis: The data was analysed by using SPSS statistical tool. Data covering mainly qualitative evidence obtained through questionnaire inquiry were analysed. All questionnaires were checked to ensure that required answers are obtained as a preparation for analysis. These answers were sorted and categorised in accordance with their meaning. Both data analysis outputs were predominantly descriptive in which tables and expected values were used to establish the meanings of the responses and their implications pertaining to the objectives and research problem of this study. The meaning of these data was instrumental in understanding the link between TQM and customer and employee focuses in construction firms in Ghana. The data was analysed

objectively to answer the research questions using estimation of mean and Chi Square analysis. In terms of discussion, findings were related to the research problem and questions, delimitation, theories and methodological approach. Conclusions, possible recommendations and future research were considered. Tentatively, the result of this study is disseminated in form of a dissertation or thesis report.

VI EMPIRICAL DATA

Among these 50 top managers, 14 of them were CEOs, 15 were Project Department managers, 8 Section managers, 7 senior engineers and 6 Quality managers. This depicted in Table 4b and by Figure 4b: Positions held by respondents.

Positions held by the respondents

Items	Respondents	Percentage (%)
CEOs	14	28.00
Project Dept. Manager	15	30.00
Section Manager	8	16.00
Quality Manager	6	12.00
Senior Engineer	7	14.00
Total	50	100.00

Source: Field survey, 2012

Profile of companies: The type of construction works undertaken by the 50 companies were as follows: 10 were solely for civil works, 18 solely for building works and 22 were engaged in both civil and building works. Table 4c depicts the type of construction work distribution among the companies.

Type of construction works

Construction works	Nr. Of companies	Percentage (%)
Building	18	36.00
Civil	10	20.00
Both	22	44.00
Total	50	100.00

Source: Field survey, 2012

In terms of number of employees of these 50 companies, 9 of them had employee ranging 1 to 20, 3 ranging more than 21 to 40, 4 each for the ranges of 41-60 and 61 to 80. Another 9 of them had employee load of range 81 to 100 and only one companies had more than 100 employees as shown in Table 4d and by Figure 4d: Number of employees.

Number of employees

Number of employees	Nr. Of companies	Percentage (%)
<20	13	26.00
20-40	7	14.00
41-60	8	16.00
61-80	8	16.00
81-100	12	24.00
>100	2	4.00
Total	50	100.00

Source: Field survey, 2012

Data presentation and analysis: Respondents indicated their views for a range of statements regarding the presence of TQM, customer focus and employee focus in their companies, presented in Table 4e.

Levels of agreement to statements (five-point likert scales, mean, Standard deviation).

TQM Statements	Mean	SD
The company has TQM policy	2.28	1.88
Top management communicates its commitment to quality to employees	1.00	0.00
TQM is incorporated in the strategic planning of this company	2.26	1.86
Quality issues are regularly discussed in the meetings of this firm	1.00	0.00
Customer focus statements	Mean	SD
There is a process of collecting customer complaints in this firm	2.13	0.88
Customer are encouraged to submit proposals and complaints	1.07	0.25
The company evaluate the degree of customer satisfaction	1.00	0.00
Customer complaints are frequent in this company	3.13	0.61
Employee focus statements	Mean	SD
Employees take initiatives	1.63	1.02
Employees participate in the decision making process	1.90	1.78
Employees participate in TQM	1.47	0.50
Employees participate in the design of quality schemes	1.93	0.81
The company evaluate the degree of employee satisfaction	1.13	0.34

Notes: On the scale used, 1=Strongly Agree, 2=Agree, 3=Neutral, 4=Disagree and 5= Strongly Disagree

Source: Field survey, 2012

From the above table, respondents strongly agreed with following statements, that top management communicates its commitment to quality to employees; TQM is incorporated in the strategic planning of this company; TQM issues are regularly discussed in the meetings of this firm; Customer are encouraged to submit proposals and complaints; The company evaluate the degree of customer satisfaction and The company evaluate the degree of employee satisfaction. They also agreed that their companies have TQM policies; There is a process of collecting customer complaints in their firms; Employees participate in the decision making process; Employees participate in TQM; Employees take initiatives and; Employees participate in the design of quality schemes.

In all, 34 out of the 50 responses received, TQM policy was in place while 16 companies reporting that no such policy existed. To investigate the hypotheses, methodology by Tukel and Rom (2001) was adopted in which respondents were categorized into those who had above average customer focus (using “Customer complaints are frequent in this company” as a proxy) or employee focus (using “Employees participate in the design of quality schemes” as a proxy) and those who had an average/below average focus. To come up with these two categories, the mean for the statement relating to TQM, customer focus and employee focus was estimated (see Table 4e) and those with scores at or below the mean were classified as above average and those with scores above the mean were classified as below average. To compare the observed and expected levels of focus of those with and without TQM policies, the Chi Square test was used. The results were as follows:

H1: Respondents working in companies with a recognized TQM scheme are likely to be employee focused in their project management practices than respondents in companies with no recognized TQM scheme.

Out of 34 contacted companies with TQM policies, 14 (representing 37.5%) were above average and 20 (62.5%) were below average. Among the 16 companies without TQM policies, 6 (16.7%) were above average whereas the rest (83.3%) were below average. The results of the Chi Square test (Figure and Table 4f) do not support the hypothesis that respondents working in companies with a recognized TQM scheme are likely to be employee focused in their project management practices than respondents in companies with no recognized TQM scheme

Table 4f: Impact of TQM on employee focus

		Above Average	Below Average	Total
WITH TQM	<i>O</i>	14	20.00	34
	<i>E</i>	13.60	20.40	
	<i>C</i>	0.012	0.008	
WITHOUT TQM	<i>O</i>	6.00	10.00	16
	<i>E</i>	6.40	9.60	
	<i>C</i>	0.025	0.017	
Total		20	30	50

Diagnostics

Chi-Sq = 0.061, DF = 1, P-Value = 0.804

O/E/C = Observed/Expected/Chi-square values

Source: Field survey, 2012

H2: Respondents working in companies with a recognized TQM scheme are likely to be customer focused in their project management practices than respondents in companies with no recognized TQM scheme.

Out of the 34 companies with TQM policies, 24 (representing 79.2%) were above average against 10 (20%) below average. Concerning the 16 companies without TQM policies, 8 were above and other 8 were below thus, 50% for each category (see Figure 4f). The results of the Chi Square test (Figure 4g) do not support the hypothesis that respondents working in companies with a recognized TQM scheme are likely to be customer focused in their project management practices than respondents in companies with no recognized TQM scheme.

Impact of TQM on customer focus

		Above Average	Below Average	Total
WITH TQM	<i>O</i>	24.00	10.00	34
	<i>E</i>	21.76	12.24	
	<i>C</i>	0.231	0.410	
WITHOUT TQM	<i>O</i>	8.00	8.00	16
	<i>E</i>	10.24	5.76	
	<i>C</i>	0.490	0.871	
Total		32	18	50

Diagnostics

Chi-Sq = 2.002, DF = 1, P-Value = 0.157

O/E/C = Observed/Expected/Chi-square values

Source: Field survey, 2012

VII CONCLUSIONS AND RECOMMENDATIONS

The general objective of this work is to study the link between TQM and the levels of internal and external customer foci in project management practices among construction firms in Ghana. In terms of specific objectives, the study looked at the relationship between the existence of TQM policy and frequency of customer complaints and participation of employees in designing quality management schemes. This has been a gray area of research in both operations management and project management. Nearly half (44%) of the companies were engaged in both building and civil works, 36% of them were into building works only while the rest (20%) were for civil works only. About a quarter (26%) of the companies had less than 20 employees, those with their employees` ranges of 20 - 40, 41 - 60 and 61 - 80, each range having less than 17%, however 28% of the companies were with work force more than 80. In meeting the objectives of this long essay, responses on the following research questions were sorted from top managers of 50 construction companies in the Greater Accra region as indicated earlier on: Is there a TQM scheme in the companies? The essence of this question is find out

whether or not contacted firm have a recognized TQM policy and majority (68%) of them had it. It was also indicated that, these companies agreed on that fact.

Respondents strongly agreed on the statements that “Top management communicates its commitment to quality to employee” and “Quality issues are regularly discussed in the meetings of this firm”, and fairly agreed that TQM is incorporated in the strategic planning of this company.

Concerning statements on customer focus, it was agreed that there were processes of collecting customer complaints. It strongly agreed that customers were encouraged to submit proposals and complaints and there were systems in place to evaluate the degree of customer satisfaction.

For employee focus related statements, it was fairly agreed that employees take initiatives; employees participate in decision-making process; employees participate in designing quality management schemes; and strongly agreed that the companies evaluate the degree of employee satisfaction.

The findings imply that both categories of companies (those with and without TQM policy) are both customer and employee focused. This could be attributed to the fact that, their activities are project-oriented (which are normally temporary endeavours embarked upon to achieve a unique product). In other words, these companies undertake a set of well defined inter-related activities designed to achieve a specific objective within a certain time frame and a budget. Subsequently, these companies apply project management knowledge, skills, tools, and techniques to project activities in order to meet project requirement.

Again, the findings are pointing to that fact that all companies with or without TQM policies apply the 9 project management knowledge areas of which both human resource management and quality management are integral parts. TQM is the other order of the day when we talk about modern quality management. Thus, companies even without recognized TQM policies still practice it.

The above stated findings’ implications also give meanings to the two results from the Chi Square analysis, which did not support the two hypotheses of this study that:

H1: Respondents working in companies with a recognized TQM scheme are likely to be employee focused in their project management practices than respondents in companies with no recognized TQM scheme.

H2: Respondents working in companies with a recognized TQM scheme are likely to be customer focused in their project management practices than respondents in companies with no recognized TQM scheme.

In both analyses, the p-values are more than 1%, 5% and 10% hence there is no impact of TQM on both customer and employee focuses of these construction companies. The implication may be that, since the activities and processes of the construction firms are project-based, they may be customer focused. According to PMBOK (2008) success of projects are determined based on meeting quality requirements, time frame and customer needs. Critical look at these parameters point to customer focus as the key objective among the three success parameters.

Construction firms in the Greater Accra region to some extents do not typify construction firms in Ghana as a whole. Nevertheless, findings of this work could be used nationwide. For instance, usage intensification of the principles, techniques and tools of project management nationwide for construction firms should be embraced. This will equipped these firms achieve the stated and implied goals in the spheres of meeting customer needs, quality requirements and time targets.

The contribution of the construction sector is likely to heighten to the economy of Ghana. The use of project management initiatives will increase chances of these construction firms being successful. This will encourage more constructional employment avenue and more contribution to GDP of the nation.

Subsequently, the use of project management initiatives could augment the market size of Ghana’s construction section through internationalization. In that, the activities, processes, and practices of most construction companies in Ghana through project management will be standardized and to meet international standards (such as ISO 9000, 2000). This in effect can yield foreign exchange earnings from this sector direct investments and projects

II. CONCLUSION

In a nutshell, from the results of this research, both constructions firms with or without a recognized TQM policy are both customer and employee focused. Thus, the results of the Chi square test do not support the two hypotheses of this study. In the light of the results, discussions and conclusions of this work, the following recommendations are made: all construction companies should equip their project management team to understand and use knowledge and skills from at least five expertise areas of the Project Management Body of Knowledge (PMBOK); Application area knowledge, standards, and regulations; Understanding the project environment; General management knowledge and skills and Interpersonal skills. Again, they should have and always update themselves with the following project management competence: Project Management Knowledge Competency (What the Project Management Team knows about Project Management); Project Management Performance Competency (What the Project Management Team can accomplish while applying the project management knowledge); and Personal Competency (How the project management team behave while performing the Project or activities)

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