

## MODELLING TOTAL QUALITY MANAGEMENT DIMENSIONS FOR SME PERFORMANCE

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### ABSTRACT

*The objective of this study is to measure the relationship between some total quality management dimensions and business performance on small and medium enterprises (SMEs). The study seeks to advance the understanding of TQM and also resolves some arguments that appear in the literature concerning the relationship between TQM dimensions and performance relationship. A questionnaire survey is undertaken, the data for this study was drawn from 359 service SMEs operating in Kano, Nigeria. Multiple regression technique was used for the data analysis. The findings indicated that management leadership has a significant effect on business performance of SMEs, whereas, the customer focus and continuous improvement to business performance relationship were found not significant. The findings of this study is of benefits to SME owner / managers and regulators of small firms, hence, future research directions were provided and explained.*

Keywords: Total quality management, Business performance, SMEs.

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### Introduction

Small and medium enterprises (SMEs) are considered as the engine of economic growth both in developed and developing countries, as they account for about 80 percent of global economic growth and contribute in employment generation and poverty alleviation (Jutla *et al.*, 2002). SMEs generally are the suppliers of larger organizations, as latter outsource a part of their production to these small enterprises. Therefore, there exist a dependence relationship between SMEs and larger organizations. However, it is noted that the quality of products produced are of low duality because SMEs are adhering to minimum quality standards which is adversely affecting the competitiveness of these larger organizations (Singh *et al.*, 2010).

TQM is a holistic approach of continuous improvement by involving all the employees and under the leadership of top management to achieve customer satisfaction by providing them with quality products and services and in return achieve higher business performance (Demirbag *et al.*, 2006; Jabeen *et al.*, 2015). As observed by O'Regan *et al.*, (2006) the last two decades have witnessed intense competition in the global market due to increasingly complex and dynamic business environment. The firm that provide quality products, focus on cost reduction, emphasize on increased customer satisfaction by fulfilling their needs and wants can survive and prosper well, and can exceed the other firms (Ross, 1994). On the other hand, if a firm does not provide good quality products and services, the customer will be dissatisfied, thus creating the opportunity for the competitors to attract the customers.

Therefore, the paper is organized as follows: section two provides the problem statement; the next section provides review of related literature; section four is about the method including research design, sample and data collection procedure, and the study measurement The next section discusses result and hypothesis test; where issues regarding goodness of measure, validity and reliability were provided and discussed. The last section lament on the discussions and limitations, future research direction and implications for both theory and management were explained.

### Problem Statement

TQM strategy is considered as among the most popular strategies (Douglas & Judge, 2001) that help small and large firms to create and sustain their competitive advantage Theoretically, the literature showed that the research conducted in exploring the impact of TQM practices and business performance produced mixed findings. Some of the studies that reported a positive and significant relationship between the two constructs includes (Samson & Terziovski, 1999; Brah *et al.*, 2000; Hendricks & Singhal, 2001; Kaynak, 2003; Al-Swidi & Mahmood, 2012; Jabeen & Mahmood, 2014; Jabeen, Aliyu, Mahmood & Kofar mata, 2014). Whereas, McCabe and Wilkinson (1998) and Yeung and Chan (1998) reported a negative relationship between TQM and business performance. Nair (2006) suggested that the inconclusive findings regarding the TQM and business performance relationship call for further extensive research work to be conducted in this area. Therefore, this study is an attempt to extend the literature by further investigating the TQM and business performance relationship within the context of SMEs of Nigeria.

### Literature Review

Powell (1995) viewed TQM as a strategic resource that can generate economic growth and provide the firm with sustainable competitive advantage. The relation between TQM and business performance has been an issue of seriously debated. Several empirical researches show that TQM affect firm performance and competitiveness (Das *et al.*, 2000, Douglas & Judge, 2001;

Kaynak, 2003). Similarly, Feng *et al.*, 2006 and Pinho (2008) considered TQM as a management practice that provides an organization with higher performance. However, Forker *et al.*, (1997); Brah *et al.*, (2002) and Joiner (2007) pointed positive relationships between TQM and organizational performance whereas Yeung and Chan (1998) found negative relationship between the two constructs. The TQM practices have been categorized both multi dimensional and uni dimensional construct. Researchers i.e. Das *et al.*, (2000) and Samson and Terziovski (1999b) considered TQM construct as a multidimensional construct, while some other researchers such as Arawati (2005); Arawati and Ridzuan (2001); Choi and Eboch (1998) and Douglas and Judge (2001) operationalized TQM as a uni-dimensional construct. Based on literature review the most commonly used TQM critical factors that affect the business performance are, Management leadership, training, customer focus, continuous improvement, strategic planning and process management. In this paper TQM is considered a multidimensional construct to examine its effect on business performance.

### **Management Leadership and Business Performance**

Management leadership is the most acknowledged and dominant dimensions of TQM strategy (Harrington & Williams, 2004). Hitt and Ireland (2002) explored that success of management leadership is determined by how leaders can utilize both social and human capital in the process of creating competitive advantage for a firm. According to Chuan and Soon (2000) the full commitment and crucial role played by the leadership of top management contribute to the success of any organizational initiatives. Management leadership is based on effective communication, teamwork spirit, empowerment, participative decision making process and effective training of employees (Koehler & Pankowski, 1996). The literature of TQM empirically recognized significance of the relationship between management leadership and firm performance (Arawati, 2005; Flynn *et al.*, 1994; Llorens Montes & Verdu Jover, 2004; Powell, 1995; Yasin *et al.*, 2004). Hence, on the basis of above arguments, the following hypothesis was proposed:

*H1: Management leadership has a significant effect on the business performance.*

### **Continues Improvement and Business Performance**

The ultimate objective of any firm be a small or large is to achieve high levels of customer's satisfaction and exceed their expectations and as a result gain higher performance. Baker (2003) stated that firms should always evaluate and assess their different managerial and technical capabilities that can contribute to achieve high level of customers' satisfaction. TQM strategy is a management philosophy that seeks to satisfy customers through continuous improvement efforts at all organizational levels and functions by involving all the stakeholders (Benavent *et al.*, 2005). Hence, firms should focus to adopt continuous improvement strategies by involving all members of the firm and covering all kind of processes (Benavent *et al.*, 2005). Top management support, proper human resource management and efficient information systems are important factors to support the continuous improvement practices in the firm (Escrig-Tena, 2004). Many previous researchers i.e. Anderson *et al.*, 1994; Flynn *et al.*, 1995; Li *et al.*, 2003; Powell, 1995) indicated that the continuous improvement practices can help the firms to achieve higher performance. The above arguments led to the following hypothesis,

*H2: Continuous Improvement has a significant effect on the business performance.*

### **Customer Focus and Business Performance**

The ultimate objective of TQM strategy is to satisfy customer's current and latent needs by providing them with quality products and services. Hunt (1995) emphasized that there should be a continuous and effective communication between customers and the firm. It was suggested that firms should develop long-life relationship strategies through a direct interaction with the customers alongside continuous monitoring of their satisfaction levels and meeting their changing needs and future expectations. By maintaining a high level of customer satisfaction through high quality and innovative products and services can create a competitive edge for the firm (Hooley *et al.*, 2003). Many researchers showed that customer satisfaction is significant for the overall performance of a firm, because higher level of customer satisfaction will lead to the lower operating cost ( Lee & Hwan, 2005), higher profit (Matzler *et al.*, 2005) the more enhanced firm's performance (Westland *et al.*, 2005). Mehra *et al.*, (2001) stated that TQM is customer-oriented strategy that emphasis on customers' satisfaction and loyalty as the core of business success, generating higher profit and competitiveness. The evidences reported in the literature have supported the notion that customer focus has a significant affect on business performance (Llorens Montes & Verdu Jover, 2004; Yasin *et al.*, 2004). Hence, the above arguments led to the following hypothesis:

*H3: Customer-Focus has a significant effect on the business performance.*

## **Methodology**

### **Research Design**

The study adopted a cross – sectional research design where the data were collected at one point in time (Kumar, Abdul Talib & Ramayah, 2013; Zikmund, Babin, Car & Griffin, 2013; Sekaran & Bougie, 2013; Shehu & Mahmood, 2014; Shehu & Mahmood, 2015; Aliyu, Rogo & Mahmood, 2015; Aliyu, Ahmad & Utai, 2015, Aliyu, 2015). A Quantitative and correlational research approach was adopted. It aimed to test hypotheses formulated from the review of the literature.

### **Population and Sample**

The population of this study consist of 359 service SMEs in Kano, Nigeria. The unit of analysis for this study is firm and studied through SME owner/managers. Based on the technique given by Krejcie and Morgan (1970) the total sample size of this study was 186. Random sampling technique was used for distribution of questionnaires to the respondents SMEs. A self-administered questionnaire method was used for data collection. 186 questionnaires were administered, a total of 117 were duly completed questionnaires were received representing 62 percent response rate.

### Measurement

The questionnaire was structured according to the objectives of the paper. The items in this study were adopted from previous researchers work. Business performance items were adopted from (Valmohammadi, 2011) and TQM items were adopted from Anderson and Sohal (1999) and Sureshchandar (2002). All items adopted were measured on a 5 point Likert scale ranging from, ranging from 1 strongly disagree to 5 strongly agree. Experts opinion was sought to ensure the face and content validity of the instrument.

### Result and Hypothesis Testing

#### Reliability and Validity

Reliability and validity tests were conducted in order to ensure error free and valid instrument for the conduct of this study. The instrument used in this study were from different sources. The most common measure of internal consistency is the Cronbach alpha coefficient. A value of 0.6 is considered as average, 0.7 and above considered as good reliability value (Hair, et al., 2010; Tabachnick and Fidell, 2014). Hence, all the measures possess a good reliability values ranging from 0.619 to 0.794. Table 1 below provides a summary of reliability test based on the Cronbach Alpha values of more than 0.6 which is considered adequate (Hair, et. al. 2006; Sekaran and Bougie, 2010). Therefore, all the constructs were deemed to have adequate reliability.

Table 1: Reliability Scores of Variables

Variables	Cronbach's Alpha
Business performance	0.794
Leadership	0.750
Customer Focus	0.716
Continuous Improvement	0.619

The study variables were validated through factor analysis. Prior to performing the analysis, the suitability of the data was assessed through two tests; Kaiser-Meyer-Olkin measure of sampling adequacy (KMO) and Bartlett's Test of Sphericity. The KMO has to be more than 0.50 and Bartlett's Test of Sphericity has to be significant. The KMO values for Business performance is 0.623; Leadership 0.835, Customer focus 0.778 and continuous improvement 0.911 respectively, which can be considered as between middling and meritorious (Kaiser, 1974) and Bartlett's Tests of Sphericity, which were significant at  $p < .000$  Bartlett. Hence, the data was adequate for further analysis.

#### Test of Hypotheses

The relationship between TQM dimensions of Leadership, customer focus, continuous improvement and business performance was tested using regression analysis. The regression analysis result in table 2 indicated that management leadership is positively and significantly related to performance, thus, H1 is supported. Whereas, customer focus and continuous improvement were negatively related to performance, hence, H2 and H3 were not supported.

Table 2: Regression of Leadership, Customer Focus, Continuous Improvement and Business Performance

	Beta	t-value	Sig.	Decision
Leadership	.441	9.997	.000	Supported
Customer Focus	.780	1.116	.107	Not supported
Continuous Improvement	.174	1.003	.862	Not supported

### Discussion and Recommendations

The present study employed multiple regression analysis, with the aim of examining the relationship between leadership, customer focus, continuous improvement and business performance of SMEs in Nigeria. The finding from the study indicated that management leadership has a significant effect on business performance of SMEs, whereas, the customer focus and continuous improvement to business performance relationship were found not supported. This research finds that management leadership is the most important factor that affects the SMEs success. The results validated the previous studies which supported that management has significant relationship with business performance (Arawati, 2005; Flynn *et al.*, 1994; Llorens Montes & Verdu Jover, 2004; Powell, 1995; Yasin *et al.*, 2004). Management leadership is the most dominant dimensions of TQM strategy to create competitive advantage for a firm. The findings of this study suggests that managers and practitioners should be more concerned to take a more dynamic approach towards TQM, for the sustainability and effectiveness of their firm to meet the future challenges.

In contrast, the findings showed that customer focus (CF) was not found to be a significant predictor of business performance. This is supported is much evid in the prior literature indicating that customer focus can result in higher business performance. The result of this study contrasts the findings of the existing studies (Jacob *et al.*, 2004; Llorens Montes & Verdu Jover, 2004; Madu *et al.*, 1995; Yasin *et al.*, 2004). The costumers are not given the deserved attention, one plausible reason that explains this finding is that in the high competitive business environment, firms focus on addressing the current customer's needs only and do not invest to focus on future needs of customers. The finding of this study also reported the insignificant effect of the continuous improvement on the business performance. The result is in contrary to the findings of the previous researchers (i.e. Benavent *et al.*, 2005; Gatchalian, 1997). To ensure a successful TQM implementation, comprehensive continuous improvement programs should be planned and implemented with the commitment and involvement of all the members of the firm.

### Limitations and Future Research

The present study was conducted in one State of Nigeira; therefore the finding may not be generalize the views and practices of SMEs in other regions of Nigeira. Future study can be conducted in other parts of Nigeria to further validate the results. This study used a survey questionnaire approach and cross sectional data was collected. Future research can be extended by longitudinal data to get a comprehensive view, because TQM is a long term strategy in nature. Only the service SMEs are considered, future studies may used other SMEs such as manufacturing, building and construction, wholesale and retail. However, other variables such as alliance orientation, learning orientation, human resource management practice, technology orientation, entrepreneurial orientation, total quality management, access to finance can be introduced to predict the direct and indirect relationship between TQM and business performance of SMEs.

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