
**RE-EXAMINING THE RELATIONSHIP BETWEEN TOTAL QUALITY
MANAGEMENT, ORGANISATION LEARNING AND SMALL AND
MEDIUM ENTERPRISES PERFORMANCE: EVIDENCE
FROM NIGERIA**

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ABSTRACT

Drawing from resource based view theory, this study re-examined the relationship between total quality management, organisation learning and small and medium enterprises (SMEs) performance in Nigerian context. A total of 198 small and medium enterprises operating in Kano and Kaduna states in the north-west geopolitical zone of Nigeria participated in the study. Results support the hypothesized effects of total quality management on small and medium enterprises performance. Similar results regarding the effect of organisation learning on small and medium enterprises performance was found. Implications of the study have been discussed.

Keywords - Organisation learning, total quality management, resource based-view theory

1. INTRODUCTION

Research on the relationships between total quality management, organisation learning and small and medium enterprises (SMEs) performance is not new because many efforts have been made by strategic management scholars to confirm the findings of prior empirical studies (Demirbag, Koh, Tatoglu, & Zaim, 2006; Douglas & Judge, 2001; Dubey & Gunasekaran, 2014; Manal, Joo, & Shouming, 2013; Mehmet, Koh, Ekrem, & Selim, 2006; Powell, 1995). Despite such accumulating research evidence supporting the link between total quality management, organisation learning and SMEs performance, however, most of the research so far has been carried out in the western and Asian contexts, such as United States (Miyagawa & Yoshida,

2010), United Kingdom (Chaston, Badger, & Sadler-Smith, 1999), China (Yusuf, Gunasekaran, & Dan, 2007), Malaysia (Samat, Ramayah, & Saad, 2006), Singapore, among others (Yeo, 2003). Hence, this represents one of the empirical gaps in the literature. The purpose of this paper was to re-examine the relationship between total quality management, organisation learning and SMEs performance in Nigerian context. Towards this end, the remainder of this paper is structured as follows. In Section 2 we reviewed prior empirical studies on the effects of total quality management and organizational learning on SMEs performance with a view to develop research hypotheses. In Section 3, the research methodology employed in the present study has been described. Next, the results of the empirical analysis have been presented in Section 4. Finally, in Section 5, the paper concludes with the discussion of results in the light of prior empirical studies as well as the implications, limitations, and suggestions for future research directions.

2. LITERATURE REVIEW

Total quality management practices and SMEs performance

Total quality management refers to “an on-going process whereby top management takes whatever steps necessary to enable everyone in the organization in the course of performing all duties to establish and achieve standards which meet or exceed the needs and expectations of their customers, both external and internal” (Miller, 1996, p. 157). Previous studies have established a significant and positive relationship between total quality management practices and SMEs performance. For example, with a sample of 414 insurance companies in Taiwan, Lee and Lee (2015) examined the role of total quality management practices in explaining SMEs performance. Using structural equation modeling, they found that total quality management practices were positively related with SMEs performance. In the same vein, Demirbag et al. (2006) showed that total quality management was found to be a strong and significant determinant of SMEs operating in the Turkish textile industry. Pinho (2008) reported a significant and positive relationship between total quality management practices and SMEs performance.

In a sample of 202 Palestinian industrial small and medium enterprises, Herzallah, Gutiérrez-Gutiérrez, and Munoz Rosas (2013) theorized the linked between total quality management practices and SMEs performance. They found significant and positive relationship between total quality management practices and SMEs performance. Relatedly, with a sample of 72 Spanish service companies, Jaca and Psomas (2015) tested whether total quality management practices have any significant influence on SMEs performance. They found a significant and positive relationship between total quality management practices and the performance of service companies in Spain. In a cross-sectional study, Sinha, Garg, and Dhalla (2016) examined whether

adoption of total quality principles (i.e., “process approach,” “mutually beneficial supplier relationship” and “factual approach to decision-making”) were related to performance of Indian SMEs. As expected, the results indicated that adoption of total quality principles has a positive influence on the performance of Indian auto component SMEs. To replicate previous findings, we advanced the following proposition:

Hypothesis 1: Total quality management has positive relationship with SMEs performance.

Organisation learning and SMEs performance

Organizational learning is defined as the capability or processes within an organization that entails development of skills, sharing such skills to others, as well as application of knowledge or skills among organisational members in order to maintain and/or improve performance (Dibella, Nevis, & Gould, 1996). As noted at the outset, previous studies have examined the relationship between organizational learning and SMEs performance. For example, Ramayah, Sulaiman, Jantan, and Ching (2004) established a significant and positive relationship between organizational learning manufacturing performance. In a similar vein, Wu and Fang (2010) also examined the linkage between organizational learning and project performance among 196 Taiwanese manufacturing and service firms. They found that organizational learning had significant positive effect on project performance. A meta-analysis by Swee, Catherine, and Tony (2012) confirmed that organizational learning capability had a significant positive relationship with both non-financial and financial performance of business. Li, Wang, and Liu (2011) also examined whether organizational learning has significant influence on firm performance. They found that organizational learning play a significant role in explaining firm performance. Therefore, the following hypothesis is postulated:

Hypothesis 2: Organizational learning has positive relationship with SMEs performance.

Based on theory and extant research (e.g., J. Barney, Wright, & Ketchen, 2001; J. B. Barney, 1991, 2000; Demirbag et al., 2006; Douglas & Judge, 2001; Dubey & Gunasekaran, 2014; Manal et al., 2013; Mehmet et al., 2006; Powell, 1995), a conceptual model (Figure 1) has been developed. The proposed conceptual model depicts the role of total quality management and organizational learning in predicting SMEs performance.

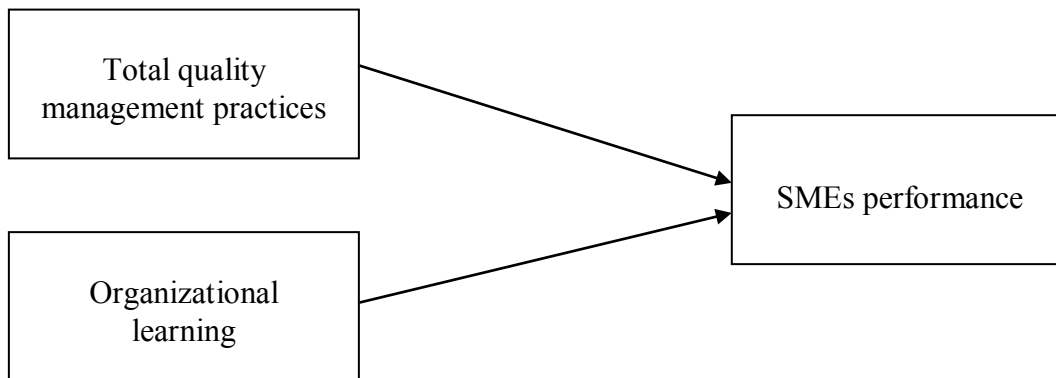


Figure 1: Conceptual model

3. METHOD

3.1 Research Design

We employed a cross-sectional research design in which the data were analysed and interpreted statistically, while drawing conclusions about the study's population at one point in time because of the costs associated with longitudinal research design (Punch, 2005; Sekaran & Bougie, 2010). The unit of analysis is organisation. Specifically, managers and owners of SME were selected to respond to research questionnaires for this study because they stand a better position to respond on behalf of their firm.

3.2 Procedure and Sample

We used a convenience sampling to collect data through self-administered questionnaires that were sent to 250 CEOs and senior level managers SMEs operating in manufacturing industry within Kano metropolis in Nigeria. Of the 250 questionnaire distributed, only 198 were usable and subsequently used for the analysis. Hence, this represents a response rate of 79percent. Regarding profile of the 198 participating SMEs in this study, 11.1 percent were sole proprietorship, 35.9 percent were partnership form of business organisation and the remaining 53 percent were incorporated as limited liability companies. About 4.5 percent of the participating firms employ less than 50 employees, 52 percent employ between 50 and 99 employees and 22 employ between 100 and 249 employees. Almost 21.2 percent of the participating firms employ between 250 and 499 employees, and the remaining 10.1 percent employ 500 or more employees.

3.3 Measures

3.3.1 Total quality management

Total quality management was assessed using a seven-item Total Quality Management Scale developed by Chenhall (1997). Ratings were completed on 7-point Likert scale (1 = “*strongly disagree*” to 7 = “*strongly agree*”). Sample item include: “Our firm strongly encourages involvement of employees in quality improvement programs (e .g .training , involvement in improvement teams)”. “Our firm encourages involvement of functional personnel (manufacturing, marketing, R & D) in strategy formulation”.

3.3.2 Organizational learning

Organizational learning was measured by adapting four items from the works of García-Morales, Llorens-Montes, and Verdú-Jover (2006). The items in this scale reflect the extent to which their firms are learning organizations. Ratings were completed using a seven-point Likert scale ranged from 1 = *strongly disagree* to 7 = *strongly agree*. Sample items include: “Our firm has learned or acquired much new and relevant knowledge over the last three years”. “Members of our firm have acquired some critical capacities and skills over the last three years”.

3.3.3 SME performance

Six-items were used to assess a broad range of SME' performance indicators. Of these items, five were adapted from the work of Powell (1995), and the remaining item was drawn from Baker and Sinkula (1999). Ratings were based on a seven-point Likert scale ranged from 1 = *strongly disagree* to 7 = *strongly agree*. Sample item include: “Over the past 3 years, our financial performance has exceeded our competitors”. “Over the past 3 years, our revenue (sales) growth has been outstanding”.

3.3.4 Firms' socio demographic variables

Firms' demographic variables such as firm age, firm ownership type, and employment size were also be included in the questionnaire. Ownership was also coded using dummy variables with “1” = Sole proprietorship, “2” = I Partnership, “3” = Limited Liability Company. The respondents were asked to indicate the size of their firm. As such, firm size was coded using dummy variables with “1” = Less than 50 employees, “2” = 50-99 employees, “3” = 100-249 employees, “4” = 250-499 employees, and “5” = 500 or more employees.

4. RESULTS

Means, standard deviations and bivariate correlations among study variables are presented in Table 1. Total quality management was positively related to SME performance ($r = 0.51$, $p > 0.10$), Organizational learning was also positively related to SME performance ($r = 0.492$, $p < 0.01$).

Table 1 Means, Standard Deviations and Correlations of Study Variables.

Variables	M	SD	1	2	3
1. Total quality management	2.984	0.935	(.904)		
2. Organizational learning	4.765	1.033	.492**	(.831)	
3. SME performance	4.561	1.062	0.095	.259**	(.912)

Note: N = 198; the reliability coefficients are in diagonal. * $p < 0.05$. ** $p < 0.01$.

4.1 Hypothesis Testing

We used simple linear regression to test our hypotheses. The results of the simple linear regression analyses are presented in Tables 2. It can be seen that the results in Table 2 supported hypothesis 1, which predicted that total quality management has positive relationship with SMEs performance ($\beta = 0.332$; $p < 0.001$). Similar findings were obtained regarding hypothesis 2, which postulated that Organizational learning has positive relationship with SMEs performance ($\beta = 0.414$; $p < 0.001$). Table 2 also indicated that the research model in the present study accounted for additional 13 percent of unique variance in SME performance. This implies that total quality management and organizational learning collectively explained 13percent of the variance in SMEs performance.

Table 2 Simple Linear Regressions: Total quality management and Organizational learning as Predictors of SME performance.

Variables	Beta	SE	t-value	p-value	Findings
Total quality management	.332	.087	3.819	.000	Supported
Organizational learning	.414	.079	5.253	.000	Supported
R-square	.132				
F	14.804				
F-Sig	.000 ^b				

Note: N = 198; * $p < 0.05$. ** $p < 0.01$; *** $p < 0.001$.

5. DISCUSSION AND CONCLUSION

Overall, the present study provided supportive evidence regarding the relationships between total quality management practices, organisational learning and SME performance. The results also provided empirical support to the resource-based view theory that articulated total quality management practices as a crucial element in achieving sustained competitive advantage and superior performance of firm, relative to its competitors (J. B. Barney, 1991, 2000; J. B. Barney & Clark, 2007; Wernerfelt, 1984). Furthermore, this findings was very much similar to the previous studies in the literature of total quality management, such as the works of Lee and Lee (2015), Demirbag et al. (2006), Pinho (2008), Herzallah et al. (2013), Jaca and Psomas (2015), as well as Sinha et al. (2016).

This study found a significant and positive influence of organisational learning on bottom line SME performance. The result is consistent to empirical findings by Ramayah et al. (2004), Wu and Fang (2010), Swee et al. (2012) Li et al. (2011), Zhou, Hu, and Shi (2015), as well as Lee and Lee (2015).

In terms of practical implications, the results of this research provided important insights on how total quality management and organisational learning, could enhance the overall performance of SMEs in Nigerian manufacturing sector. Subsequently, the results of this study would serve as a blueprint for the policy-makers and practitioners in formulating vital policies that could assist and help in improving the overall performance of SMEs. The findings suggested that managers of SMEs require working alongside strategic business units, including marketing and quality assurance departments to design relevant policies that help in promoting customer satisfaction and firm performance (Lai, 2003; Lai & Cheng, 2005). In conclusion, the present study has replicated and extended our knowledge of the underlying factors explaining SME performance, which has focused specifically on total quality management and organisational learning in Nigerian context. The results are notable because they are well grounded in aspects of the literatures on total quality management and organisational learning.

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