

The Impact of Total Quality Management (TQM) on Organisational Sustainability: The Case of the Hotel Industry in Saudi Arabia: Empirical Study

^{1,2}Khalid Alharbi, ²Ebrahim Mohammed Al-Matari and ¹Rushami Zien Yusoff

¹School of Business and Management (SBM),

²School of Accountancy (SOA), College of Business (COB),

Universiti Utara Malaysia (UUM), Amran University, Amran, Sintok Kedah, Yaman, Malaysia

Abstract: The main aim behind this study is to examine the impact of Total Quality Management (TQM) and organizational sustainability among the hotel firms in Saudi Arabia. It also proposes and tests the study model through data collected with the help of survey questionnaire distributed to 204 hotel firms in Saudi Arabia. Data was analyzed through the use of Partial Least Squares (PLS) structural equation modeling. The findings revealed a positive and significant TQM-organizational sustainability relationship. Towards the end of the study, some limitations and suggestions for future avenues of research are provided.

Key words: Total quality management, organisational sustainability and hotel industry in Saudi Arabia, future, data, Malaysia

INTRODUCTION

Organizations in different sectors around the world are continuously attempting to meet their objectives to enhance their market positions. Considering that in the current market, competition is highly dynamic and is characterized by the production of the same product or service delivery from multiple organizations there is a competition to enhance the quality of such products and services in order to gain competitive advantage among rivals (Zhou *et al.*, 2005). Without gaining competitive advantage, the organizations may lose their competitiveness and will no longer be able to be one of the players in the market (Anderson *et al.*, 1994).

According to Silva and Quelhas (2006), organizational sustainability is a search for a balance between what society wants, what is good for the economy and what sustains ecology. Along a similar line of contention, Savitz and Weber stated that the sustainability of the company is evident from the way it produces profits for its shareholders, safeguards the environment and enhances the people's lives. Meanwhile, Dillick and Hockerts (2002) described organizational sustainability as the companies' capacity to leverage their economic, social and environmental capital to contribute towards the sustainability progression within their political positions.

In a related study, Munck and Borim-de-Souza stated that the sustainable actions of the organization are the

ones accountable for the environmental impact of their operational activities and at the same time for the socio-economic development that allow the present and future generations to survive. This is related to the question whether organizations are able to create a balance between their financial objectives and their non-financial ones that concerns the environment. These two can be balanced by management if they ensure that quality practices are adopted.

Moreover, quality management has transformed into a global issue with the increasing trend of organizations (both private and public, manufacturing and services) trying their hand at quality management implementation. It is increasingly notable that the quality is of strategic importance in a way that quality management is no longer deemed to be just an operational issue and that organizations are attempting to match their employed strategy to the concerns about quality in the hopes of achieving competitive advantage (Anderson *et al.*, 1995). This is only possible if the organization is convinced that quality management implementation can enhance the organizational quality in all aspects.

Total quality management refers to the continuous striving to achieve or exceed the requirements or expectations of customers (both external and internal) in the entire processes wherein all the employees work towards continuous improvement. TQM is able to combine the most optimum organizational excellence

aspects and stave away fear, provide customer-centered services, facilitate first time doing right and keeping up with inventory control while keeping waste to the minimum. TQM was first introduced as a means for achieving a target that has been established at a strategic level and to ensure that objectives are met.

Majority of the prior studies dedicated to examining TQM practices and organizational sustainability have been carried out in the context of Western nations while both developing and emerging nations were largely ignored. According to Johnston, there is limited studies concerning organizational sustainability in the context of emerging and developing nations as majority of studies in this caliber has been mostly carried out by western scholars and researchers and other developed countries. This study therefore contributes to literature by focusing on TQM practices and organizational sustainability in the context of Saudi Arabia, a developing nation.

Literature review

Total quality management and organisational sustainability: Total Quality Management (TQM) has been extensively acknowledged as a management philosophy and it has become the major slogan as firms race towards obtaining competitive advantage in the markets (Sureshchandar *et al.*, 2001). It concentrates on ongoing process enhancement in organizations to facilitate superior customer value and satisfy the needs of customers. Customer satisfaction entails the operations of the firms to focus on the understanding, sharing and response towards the customers' requirements via marketing. Firms that adopt and implement the marketing concept are more likely to adopt a market orientation. In other words, market-oriented firms have been known to maintain a robust competitive niche in the market (Walker and Mullins, 2006). Hence, TQM and market orientation can form the firm strategy and provide it with a competitive advantage so that it may be able to compete in the market.

The current dynamic business environment rife with competition calls for firms to be capable of sustaining competitive advantage for business survival. Competitive advantage calls for quality-a term that refers to the measurement of the way the company meets or exceeds the requirements and expectations of its customers (Oakland, 2000). In the hospitality industry, there is robust market competition and as such customer satisfaction and loyalty is pertinent for hotel survival and success.

Moreover, the implementation of TQM is related with customer satisfaction in terms of their latent and expressed needs and this in turn will lead to superior

organizational financial performance in comparison to rivals that did not implement TQM (Hansson and Eriksson, 2002; Hendricks and Singhal, 1997). A notable study comes from Isaksson who stated that TQM is primarily responsible to foster organizational sustainability. Other studies like Wreder also underscored the benefits that come from employing strategic practice with the inclusion of social, economic and environmental benefits.

Added to the above studies concerning TQM, Yusuf *et al.* (2007) explained that TQM involves the combination of the efforts of the organization towards realizing quality improvement, quality development and quality maintenance in order to satisfy customers at different levels. TQM improves work quality and employer satisfaction via the customers' involvement and participation (Yusuf *et al.*, 2007). The organizational image could be enhanced if the organization gets involved with helping the community of its operations and assist in social welfare and in solving environmental issues. Therefore, developing the hypothesis on the guiding theory (Barney, 2000), the researcher proposes that:

- H: Total Quality Management (TQM) is positively associated with organizational sustainability

MATERIALS AND METHODS

The present study has two major variables namely independent and dependent variables, where the former is hypothesized to be TQM and the dependent one is organizational sustainability in the tourism sector of Saudi Arabia in the cities of Mecca and Medina.

The researcher selects 20% of the total number of Saudi hotels (186 hotels) as the least sample size of the study as recommended by Bartlett *et al.* (2001). The researcher argued that 20% of the whole population should be sufficient to be representatives of the population. The current study's sample size is 204 and was deemed to be proper for factor analysis.

For the measurement of TQM, 41 items were adopted from works conducted by Kumar *et al.* (2011), Demirbag *et al.* (2006), Prajogo and Sohal (2004). Added to this, the organizational stability is measured by seven items used Stettler's study.

Statistical analysis and results: The reliability and validity of the outer model was examined and confirmed through the use of Partial Least Square (PLS). Prior studies stated that the initial tests of reliability and validity have to be undergoing prior to testing the proposed hypotheses. The study model comprises of



Fig. 1: The research framework

Total Quality Management (TQM) and Organizational Sustainability (COSUS) the relationship between the variables was examined by using a two-step method recommended by Chin (1998) (Fig. 1).

Based on the studies concerning Structural Equation Modeling (SEM), the construct validity and reliability of the model have to be confirmed prior to investigating whether or not the proposed hypotheses are accepted or rejected.

The outer model (measurement): The sub-sections following this section provide a presentation of the testing of validity and reliability of the constructs prior to establishing the measurement model's goodness. Both construct validity and reliability was examined through content validity, discriminant validity and convergent validity.

The content validity: In the literature concerning multivariate analysis, contention validity of the construct can be validated by comparing it to other constructs in the model. In relation to this, Chin (1998) and Hair *et al.* (2010) indicated that factor loading can be used for the examination of the content validity and to achieve this, items that load higher on other constructs compared to their respective ones should be dropped. The entire constructs in this study loaded higher in their respective variables as evident by the values listed in Table 1 and thus, the results confirm the measurement model's content validity.

The convergent validity: Convergent validity refers to the level of a group of items converging to gauge a certain variable (Hair *et al.*, 2010). SEM studies revealed that convergent validity can be confirmed by examining the composite reliability, loading and the Average Variance Extracted (AVE). The items high loading and statistical significance is based on the value of factor loading that has to be at least 0.7, AVE of at least 0.5 and composite reliability of at least 0.7. All the mentioned criteria was achieved and confirmed as evident from the values listed Table 2 indicating that the outer model has convergent validity (Bagozzi and Yi, 1988).

The discriminant validity: Discriminant validity is defined as the level to which the items can differentiate a construct from other constructs in the model. The items of each construct should vary among them more than among other constructs in the model.

Table 1: Cross Loadings of the items

Construct/items	COSUS	TQM
Organisational Sustainability (COSUS)		
COSUS1	0.799	0.593
COSUS2	0.849	0.591
COSUS3	0.814	0.622
COSUS5	0.854	0.557
COSUS6	0.747	0.537
COSUS7	0.803	0.585
Total Quality Management (TQM)		
TQMAI26	0.544	0.812
TQMAI27	0.427	0.713
TQMCI28	0.518	0.756
TQMCI29	0.539	0.772
TQMMPM31	0.579	0.753
TQMMPM32	0.622	0.760
TQMMPM33	0.581	0.686
TQMMPM34	0.557	0.832
TQMMPM35	0.480	0.748
TQMMPM36	0.609	0.799
TQM37	0.502	0.723
TQM38	0.447	0.730
TQM39	0.506	0.760
TQM40	0.479	0.707
TQM41	0.642	0.764

The diagonal line of values containing the square root of AVE and below is depicted to show the correlations of the constructs (Table 3). In order to confirm the discriminant validity, the values of the diagonal line have to be compared with those off diagonal ones-it is evident from the table that the values of the diagonal line are greater compared to the others in their respective columns and rows and as such discriminant validity of the model is confirmed on the basis by Fornell and Larcker (1981)'s established condition.

The inner model (structural model) and hypotheses testing: Following the confirmation of the constructs' validity and reliability, the proceeding phase involves the examination of the inner model by testing the hypothesis with the help of Algorithm and Bootstrapping in PLS (Fig. 2 and Table 4).

In Fig. 2 and Table 4, it is clear that the three hypotheses showed positive and significant results at the level of significance of 0.001 ($\beta = 0.718, t = 23.153, p < 0.01$) indicating that H_1 is supported.

Predictive relevance of the model: R^2 , cross validated redundancy and cross-validated communality were employed to test the predictive power of the model. According to Cohen (1988), values of R^2 are substantial with 0.26, moderate with 0.13 and weak with 0.02. All values in the table of R^2 are considered substantial. Cross-validated redundancy and cross validated communality are the medium to assess the model's quality. To extract them, blind folding procedure in PLS was employed. Their values should be >0 to say that

Table 2: The convergent validity analysis

Construct/items	Loadings	Cronbach's alpha	Reliability composite ^a	AVE ^b
Organisational Sustainability (COSUS)				
COSUS1	0.799	0.896	0.920	0.659
COSUS2	0.849			
COSUS3	0.814			
COSUS5	0.854			
COSUS6	0.747			
COSUS7	0.803			
Total Quality Management (TQM)				
TQMAI26	0.812	0.946	0.952	0.570
TQMAI27	0.713			
TQMCI28	0.756			
TQMCI29	0.772			
TQMPM31	0.753			
TQMPM32	0.760			
TQMPM33	0.686			
TQMPM34	0.832			
TQMPM35	0.748			
TQMPM36	0.799			
TQM37	0.723			
TQM38	0.730			
TQM39	0.760			
TQM40	0.707			
TQM41	0.764			

Table 3: Correlation and discriminant validity

Construct	COSUS	TQM
Organisational Sustainability (COSUS)	0.812	
Total Quality Management (TQM)	0.718	0.755

Table 4: Hypotheses testing results

Hypothesis	Path coefficient	SE	t-value	p-value	Decision
TQM → COSUS	0.718	0.031	23.153	0.000	Supported

Table 5: Prediction relevance of the model

Construct	R ²	Cross-validity redundancy	Cross-validity communality
Organisational Sustainability (COSUS)	0.515	0.334	0.656

Table 6: Goodness of Fit (GoF) of the model

No	Construct	R ²	Average variance extracted	Goodness of fit
H ₁	Organisational Sustainability (COSUS)	0.515	0.659	
H ₂	Total Quality Management (TQM)		0.570	
	Average	0.515	0.615	0.316

the model has predictive quality (Fornell and Larcker, 1981). Table 5 shows that the values are >0 and therefore confirming that the model has predictive quality.

Goodness of Fit (GoF) of the model: Wetzels *et al.* (2009) contended that the confirmation of GoF can be established on the basis of following criteria; 0.1 is considered as small, 0.25 is considered as medium and 0.36 is considered as large. On the basis of the figures in Table 6, GoF value obtained is 0.316 revealing that the value is high medium according to criteria provided above.



Fig. 2: Hypotheses testing results

RESULTS AND DISCUSSION

Total Quality Management (TQM) on organisational sustainability: According to the findings of prior studies and the discussion of theories it is hypothesized that a positive relationship exists between total quality management and organizational sustainability in the Saudi hotel industry. The statistical result supports the positive and significant relationship between the two at the level of significance of 0.01 ($\beta = 0.718$, $t = 23.153$, $p < 0.01$).

This result is consistent with prior studies that also found a positive significant relationship between the two constructs and the likely proof of the relationship is reflected in good sustainability with TQM represented in light of the application of the quality management principles to the entire organizational levels and aspects (Dale, 2003). TQM entails a managerial system that covers all the tools and methods (Hellsten and Klefsjo, 2000) and through its role in minimizing and sustaining resources, organizational sustainability is achieved. It is therefore important to emphasize that TQM refers to an organizational value that encompasses overall cultural settings (Hellsten and Klefsjo, 2000) where the assignment of values differs through different settings. For example, according to Sila and Ebrahimpour (2002), there are differences and similarities between the values of TQM and with regards to the resource-based view (Barney, 2000), Bergman and Klefsjo illustrated that TQM provides advantages through processes, ongoing improvement, customer satisfaction and lastly, organizational commitment.

CONCLUSION

This study provides contribution to literature concerning the TQM-organizational sustainability relationship in the Saudi hotel industry. The study sample consisted of 204 middle managers that were randomly selected from a total of 932 hotels in the five Saudi cities of Mecca, Madinah, Riyadh, Jeddah and the Eastern Province. The relationship between independent and dependent variables was analyzed through PLS and the results showed a positive and significant relationship between TQM and organizational sustainability.

LIMITATIONS

With regards to the limitations of the study, first, the study was conducted in the context of Saudi Arabia and thus, further studies may concentrate on other variables in other countries (e.g., the GCC countries like Oman, Qatar, Bahrain, Kuwait) to contribute to the policy market in improving TQM determinants, use change agents and transform the organizational climate to enhance the sustainability of organizations. The second limitation pertains to the relationship between TQM and organizational sustainability where there are some variables that have the possibility of enhancing the latter like leadership, organizational culture among others and these variables should be taken into consideration in future studies. The third limitation is the possibility of a third variable acting as a moderating role like organizational culture, regulations, among others that will add to the strength of organizational sustainability and these were not addressed in the present study and thus, future studies may address them. Lastly, the R^2 of sustainability obtained by the analysis was 52% indicating that the variables of the model explain 52% of organizational sustainability. It can therefore be concluded from this result that other variables are responsible of affecting sustainability and these variables may be focused on by future authors in the field.

REFERENCES

- Anderson, E.W., C. Fornell and D.R. Lehmann, 1994. Customer satisfaction, market share, and profitability: Findings from Sweden. *J. Marketing*, 58: 53-66.
- Anderson, J.C., M. Rungtusanatham, R.G. Schroeder and S. Devaraj, 1995. A path analytic model of a theory of quality management underlying the deming management method: Preliminary empirical findings. *Decision Sci.*, 26: 637-658.
- Bagozzi, R.P. and Y. Yi, 1988. On the evaluation of structural equation models. *J. Acad. Market. Sci.*, 16: 74-94.
- Barney, J.B., 2000. Firm resources and sustained competitive advantage. *Adv. Strat. Manage.*, 17: 203-227.
- Bartlett, J.E., J.W. Kotrlik and C.C. Higgins, 2001. Organizational research: Determining appropriate sample size in survey research. *Inform. Technol. Learn. Perform. J.*, 19: 43-50.
- Chin, W.W., 1998. The partial least squares approach to structural equation modeling. *Modern Methods Bus. Res.*, 295: 295-336.
- Cohen, J., 1988. *Statistical Power Analysis for the Behavioral Sciences*. 2nd Edn., Lawrence Erlbaum, Hillsdale, New Jersey, USA., ISBN: 0-8058-6283-5, Pages: 128.
- Dale, G.B., 2003. *Managing Quality*. 4th Edn., Blackwell Publishing, USA.
- Demirbag, M., E. Tatoglu, M. Tekinkus and S. Zaim, 2006. An analysis of the relationship between TQM implementation and organizational performance: Evidence from Turkish SMEs. *J. Manuf. Technol. Manage.*, 17: 829-847.
- Dillick, T. and K. Hockerts, 2002. Beyond the business case for corporate sustainability. *Bus. Strategy Environ.*, 11: 130-141.
- Fornell, C. and D.F. Larcker, 1981. Evaluating structural equation models with unobservable variables and measurement error. *J. Marketing Res.*, 18: 39-50.
- Hair, Jr. J.F., W.C. Black, B.J. Babin and R.E. Anderson, 2010. *Multivariate Data Analysis*. 7th Edn., Prentice Hall, Upper Saddle River, NJ., ISBN-13: 9780138132637, Pages: 785.
- Hansson, J. and H. Eriksson, 2002. The impact of TQM on financial performance. *Measuring Bus. Excellence*, 6: 44-54.
- Hellsten, U. and B. Klefsjo, 2000. TQM as a management system consisting of values, techniques and tools. *TQM. Mag.*, 12: 238-244.
- Hendricks, K.B. and V.R. Singhal, 1997. Does implementing an effective TQM program actually improve operating performance?. Empirical evidence from firms that have won quality awards. *Manage. Sci.*, 43: 1258-1274.
- Kumar, C., A. Igarria, B. Dautreux, A.G. Planson and C. Junot *et al.*, 2011. Glutathione revisited: A vital function in iron metabolism and ancillary role in thiol redox control. *EMBO. J.*, 30: 2044-2056.
- Oakland, J.S., 2000. *Total Quality Management: Text with Cases*. 2nd Edn., Butterworth-Heinemann, Burlington, Massachusetts, USA., ISBN-13: 9780750639521, Pages: 380.
- Prajogo, D.I. and A.S. Sohal, 2004. Transitioning from total quality management to total innovation management: An Australian case. *Int. J. Q. Reliab. Manage.*, 21: 861-875.
- Sila, I. and M. Ebrahimpour, 2002. An investigation of the total quality management survey based research published between 1989 and 2000: A literature review. *Int. J. Qual. Reliab. Manage.*, 19: 902-970.
- Sureshchandar, G.S., C. Rajendran and R.N. Anantharaman, 2001. A conceptual model for total quality management in service organizations. *Total Qual. Manage.*, 12: 343-363.

- Walker, O.C. and J.W. Mullins, 2011. *Marketing Strategy: A Decision-Focused Approach*. 7th Edn., McGraw-Hill Irwin, New York, USA., ISBN: 9780070171466, Pages: 352.
- Wetzels, M., G.O. Schroder and C.V. Oppen, 2009. Using PLS path modeling for assessing hierarchical construct models: Guidelines and empirical illustration. *MIS. Q.*, 33: 177-195.
- Yusuf, Y., A. Gunasekaran and G. Dan, 2007. Implementation of TQM in China and organisation performance: An empirical investigation. *Total Q. Manage.*, 18: 509-530.
- Zhou, K.Z., C.K. Yim and D.K. Tse, 2005. The effects of strategic orientations on technology-and market-based breakthrough innovations. *J. Market.*, 69: 42-60.