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Effect of Total Quality Management Practices in Private Organization in the UAE

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ABSTRACT: All organizations strive for the highest aim in business, which is organizational performance – this is true for both public and private organizations. In relation to performance, TQM refers to an effective tool used to achieve excellent performance based on the management premise that stems back to decades. The study aim remains at examining the effect of Total Quality Management Practices (TQMP) on performance of organization with reference to Fujairah Asia Power Company(FAPCO)located to UAE. The present study adopts quantitative research design in its quest to achieve a credible study. As such, questionnaire was developed and used to elicit the respondents' opinion on the effects of TQM on the UAE public sector performance. 220 usable responses were evaluated using SPSS software and PLS SEM-VB was used for assessing the current research model. The study employed random sampling technique was adopted to gather the required quantitative data. Based on the findings in relation to this objective, the study concluded that the results indicated that TQM has a significant and positive impact on organizational performance. Results would give insights for FABCO and public sector in the UAE in order to enhance performance of organization with focus on TQM.

Keywords: Total quality management practices; organizational performance; UAE.

I. INTRODUCTION

All organizations strive for the highest aim in business, which is organizational performance – this is true for both public and private organizations. In relation to performance, TQM refers to an effective tool used to achieve excellent performance based on the management premise that stems back to decades. Every organization needs TQM in order to facilitate on-going quality improvements and to meet the customers' needs [1]. In most of the contemporary organizations, adopting technology uses ICT for filling up the records and also as a tool for identifying, analyzing, recording, interpreting and communicating the information that is used for planning by the organization [2-4]. The technique is implemented in introducing control mechanism within the organization and assuring accountability for resources [2, 3].

Prior studies indicated that TQM is a required philosophy to be able to maintain business in the present environment. TQM functions to enhance the performance of the organization as evidenced by majority of authors. However, the studies' findings are still mixed, specifically in the study branch that evidenced TQM influence on the performance of organizations and these cover a significant number of studies [5-13]. It is clear that the UAE is trying to become a leading technology center based on the innovation strategy of the 4th Industrial Revolution [14, 15].

Other researchers indicated no significant influence of TQM on the performance of organizations [16-19].

Furthermore, still another notable issue when it comes to TQM-performance relationship is that majority of authors dedicated their work to the developed countries [20-25], while only minimal research were carried out this relationship study in context of developing countries [26].

The current study is unique in that it examines all the variables in the case of Fujairah Asia Power Company (FAPCO) power sector, Abu Dhabi. In this regard, this study attempts to minimize the gap in literature when it comes to the study variables, and to eventually help managers, engineer and decision-makers of FAPCO to be aware of their present situation and the enhancements they need.

II. REVIEW OF LITERATURE

A. Organizational Performance (OP)

OP, in context of organizations, can be defined by equating it with an objective dominated by the firm [27]. In other words, the organization has direct control over the organizational performance indicators that varies from outcomes as the latter is so much broader in nature. Cyber-physical systems, IOT, cloud computing and cognitive computing are included while analyzing organization's performance [15-19].

In Rao (2019) study, the author explained that financial performance of the organization is a significant factor that measures the company profits [28]. Nevertheless, the non-financial performance of the firm has been increasingly focused on in the past years in assessing public firms' service provision. Different global indicators will help in understanding the UAE as per the international standards.

In the present study, the author focuses on FAPCO's organizational performance and on the assessment of its non-financial performance owing to several reasons; first, FAPCO is a private entity that provides water and power to the public, focusing mainly on profitability and financial income and second, its primary aim is to meet the satisfaction of customers, improve quality and competitiveness. Moreover, it is thus more suitable to measure FAPCO performance through financial measures as it depends on its financial performance to satisfy clients, achieve goals and aims.

B. Total Quality Management Practices (TQMP)

Stahl (1995) [29] defined TQMP as an approach to

enhance value of customers via improving the organizational process and designs. It was also defined as a method of creatively finding out solutions for managing the quality by aiming at improving the products, services and operations, as well as goods/services generation mechanism [30].The top TQM crucial success factors in the current study was evaluated that were considered apt for the public sector, which included leadership, strategic planning, designing of the service, collection of information and its analysis, improvement on a regular basis along with benchmarking, which offers multidimensional analysis of TQM.

Several prior authors have evidenced leadership as a top factor when it comes to business performance [30-34]. In fact, commitment from higher management seems to be considered as a major drive for excellence in the field of business between the organizations. Furthermore, empirical studies examining the influence of strategic planning on performance quality are very limited; however, a crucial link has been observed between them [35]. Moreover, many studies [24, 35-38] have stated the significance of human resource in enhancing performance of the organization. The quality and organization performance are exhibited by the product and design of the service with respect to timely delivery, errors, quality costs, responsiveness and customer satisfaction [39, 40]. Moreover, literature evidenced the positive influence of information on the organizational performance [19, 41, 42]. Further, through the improvement of organizational processes, it becomes possible for the organization to produce innovation, enhance internal and external processes, satisfy the expectations of customers and develop stakeholders' value. Literature dedicated to TQM shows a positive continuous improvement-organizational performance relationship [43-45] as well as between continuous improvement and long-term competitive advantages [46]. In addition, the dynamic benchmarking importance in enhancing organizational performance was stressed by Yusuf *et al*. (2007), [46] in terms of achieving competitive advantage.

These practices were highlighted for the following reasons; first, they have been often used (frequently used compared to other factors) in many studies relating to the service industries; second, they have been cited as the key TQM implementation practices in service as well as manufacturing industries [47]; third, they represent the hard and soft components of TQM; and lastly, they are related to services and the promotion of the quality of service [48]. Thus, the following hypothesis has been obtained:

H1: Management leadership as a positive effect on organizational performance.
H2: Strategic planning has a positive effect on organizational performance.
H3: Human resources has a positive effect on organizational performance.
H4: Service design has a positive effect on organizational performance.
H5: Information and analysis has a positive effect on organizational performance.
H6: Continuous improvement has a positive effect on organizational performance.
H7: Benchmarking has a positive effect on organizational performance.

III. RESEARCH METHODOLOGY

A. Proposed Conceptual Framework

Resource-based view theory (RBV) that was first proposed by Wernerfelt (1984) [49] is suitable as the underpinning theory of the study framework. Literature is rife with gaps on the relationships among the variables, which calls for more in-depth examination of the proposed relationships. Hence, the study framework has been made basing on the literature study and accordingly, by the relationship established between TQMP and performance of the organization (Fig. 1).

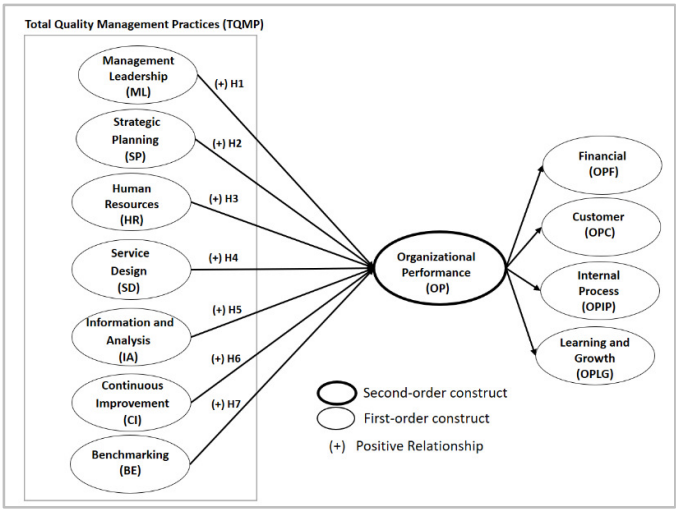


Fig. 1. The proposed conceptual framework.

B. Development of Instrument and Collection of Data

The survey questionnaire, being the primary data tool, collected data over a period span of three months (August 2018-October 2018), with the final data samples numbering 220 obtained from the FAPCO sections and branches. The study employed random sampling to select FAPCO sections as based on Creswell (2003) recommendation [50]. The obtained quantitative data from the questionnaire were exposed to different analytical methods. Data analysis was conducted using the SPSS, version 23.0 and Smart PLS3.0. The data analysis methods were chosen on the basis of the

research questions and the characteristics of the variables. The Likert scale was used for variable measurement [51-53].

IV. DATA ANALYSIS

PLS SEM-VB was employed in order to assess the research model via SmartPLS 3.0 software [54]. A two-phase analytical technique [45] consisting of (i) measurement model analysis (reliability and validity) and (ii) structural model analysis (examining the conceptualized relationships) was employed after performing the descriptive assessment. This two-phase analytical technique consisting of a structural and a measurement model assessment is better than a single phase assessment [55, 56]. While the model of measurement explains each parameter's measurement, the structural model describes the correlation between the parameters in this model [57].

A. Descriptive analysis

Table 1 exhibits the values for mean and SD. The responses collected from the respondents were put on a 5-point scale ranging from 1 (strongly disagree) to 5(strongly agree). Customer score remained highest with mean 3.984 of 5.0, with 0.827 SD.

B. Measurement Model Assessment

Construct reliability as well as validity were used to examine the measurement model. The particular alpha coefficients of Cronbach were tested to determine the core parameter's reliability. The quantities of all the unique alpha coefficients of Cronbach in this research ranged from 0.778 to 0.955, which went beyond the proposed value of 0.7 [58]. Moreover, for inspecting construct reliability, all the CR (composite reality) values ranged from 0.870 to 0.961, which went beyond 0.7 [59-61]. Thus, as Table 1 exhibits construct reliability values that are stated by Cronbach's CR and alpha.

Indicator analysis was performed via factor loadings method. When the related indicators are very similar, this is reflected in the construct and signified by the construct's high loadings [57]. As per Hair *et al.* (2010) [56], the exceeding of values beyond 0.70 suggests substantial factor loadings. Table 1 shows factor loadings for all items to be higher than the value that was suggested.

AVE (average variance extracted) was employed in order to analyze convergent validity that shows the degree to which a measure is correlated positively with the same construct's other measures. All the AVE values ranged from 0.685 and 0.846, which went beyond the proposed value of 0.50 [56]. Thus, all constructs have complied with the convergent validity acceptably (Table 1).

The degree to which the articles distinguish among concepts or measure different constructs is demonstrated by discriminant validity. Fornell-Larcker was used as an analysis tool for finding out the discriminant validity of the model (Table 2). AVEs' square root on the diagonals (displayed in bold) was found to be high compared to the correlations among the constructs (corresponding row as well as column values), which suggests strong correlation within the concepts and their respective markers [62, 63].

Table 1: **Measurement model assessmen.**

Constructs	Item	Loading (> 0.7)	M	SD	α (> 0.7)	CR(> 0.7)	AVE(> 0.5)
Management Leadership (ML)	ML1 ML2 ML3 ML4	0.890 0.933 0.898 0.892	3.818	1.075	0.925	0.947	0.816
Strategic Planning (SP)	SP1 SP2 SP3 SP4	0.912 0.913 0.856 0.894	3.863	1.031	0.916	0.941	0.799
Human Resources (HR)	HR1 HR2 HR3 HR4 HR5 HR6 HR7 HR8 HR9	0.845 0.862 0.873 0.885 0.841 0.854 0.877 0.816 0.860	3.827	0.986	0.955	0.961	0.735
Service Design (SD)	SD1 SD2 SD3	0.920 0.925 0.913	3.842	1.039	0.909	0.943	0.846
Information and Analysis (IA)	IA1 IA2 IA3 IA4 IA5	0.885 0.897 0.879 0.907 0.875	3.825	1.003	0.934	0.950	0.790
Continuous Improvement (CI)	CI1 CI2 CI3 CI4	0.899 0.875 0.887 0.874	3.850	0.998	0.906	0.934	0.781
Benchmarking (BE)	BE1 BE2 BE3	0.850 0.919 0.915	3.774	1.050	0.875	0.924	0.801
Financial (OPF)	OPF1 OPF2 OPF3	0.876 0.733 0.877	3.809	0.869	0.778	0.870	0.691
Customer	OPC1	0.796	3.984	0.827	0.847	0.897	0.685

(OPC)	OPC2 OPC3 OPC4	0.832 0.830 0.853					
Internal Process (OPIP)	OPIP1 OPIP2 OPIP3 OPIP4	0.841 0.836 0.843 0.855	3.927	0.900	0.865	0.908	0.712
Learning and Growth (OPLG)	OPLG1 OPLG2 OPLG3 OPLG4	0.862 0.895 0.894 0.844	3.893	0.904	0.897	0.928	0.764

Note: M = Mean; SD = Standard Deviation, α= Cronbach's alpha; CR = Composite Reliability, AVE = Average Variance Extracted.

Table 2: Fornell-Larcker criterion.

	BE	*CI*	*HR*	*IA*	*ML*	*OPC*	*OPF*	*OPIP*	*OPLG*	*SD*	*SP*
BE	**0.895**										
CI	0.446	**0.884**									
HR	0.509	0.458	**0.857**								
IA	0.486	0.440	0.557	**0.889**							
ML	0.441	0.446	0.494	0.436	**0.903**						
OPC	0.442	0.351	0.461	0.395	0.376	**0.828**					
OPF	0.441	0.423	0.419	0.385	0.364	0.310	**0.831**				
OPIP	0.469	0.457	0.504	0.461	0.414	0.409	0.326	**0.844**			
OPLG	0.455	0.460	0.513	0.539	0.431	0.414	0.346	0.501	**0.874**		
SD	0.467	0.397	0.498	0.434	0.442	0.313	0.421	0.430	0.439	**0.920**	
SP	0.433	0.401	0.465	0.472	0.393	0.337	0.409	0.431	0.418	0.382	**0.894**

Note: Diagonals represent the square root of the average variance extracted while the other entries represent the correlations.

Key: ML: management leadership, SP: strategic planning, HR: human resources, SD: service design, IA: information and analysis, CI: continuous improvement, BE: benchmarking, OPF: financial, OPC: customer, OPIP: internal process, OPLG: learning and growth.

C. Structural Model Assessment

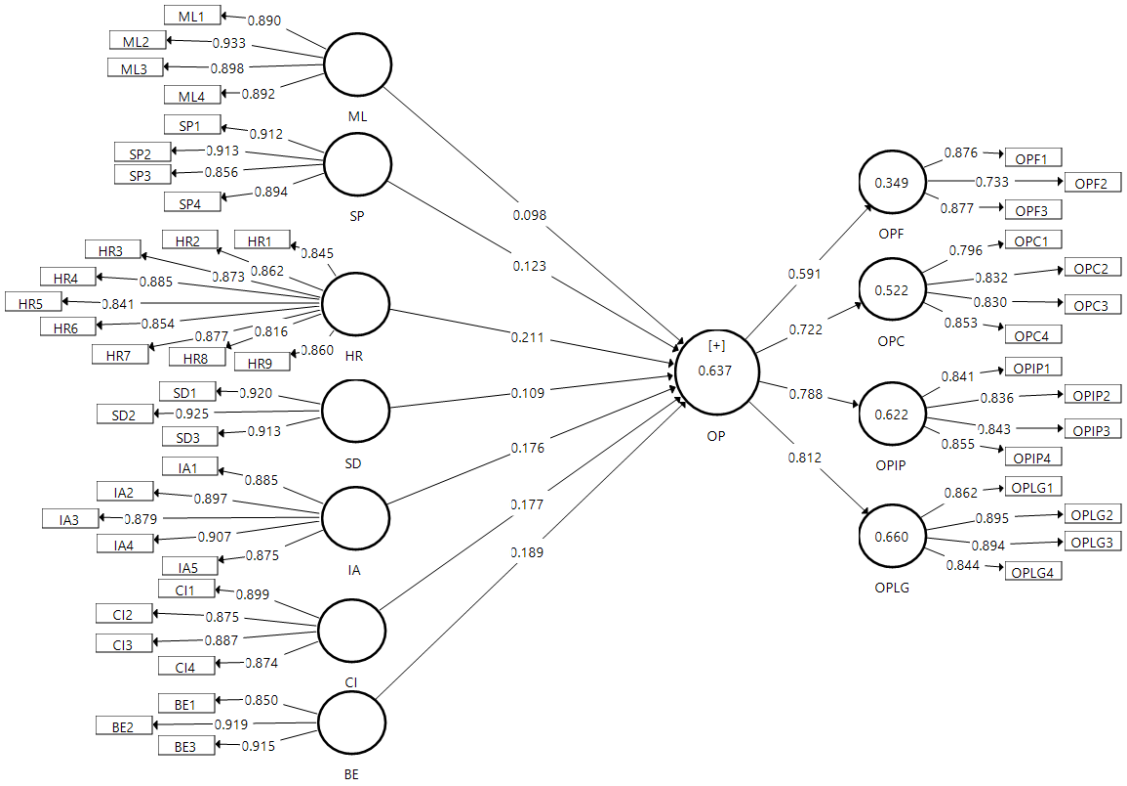
This model can be tested by computing beta (β), R^2, and the corresponding t-values via a bootstrapping procedure with 5000 resamples.

Figure 2 and Table 3showed the outcome for hypothesis tests. H1, H2, H3, H4, H5, H6, and H7 are accepted with ($\beta = 0.098, t = 2.105, p < 0.05$), ($\beta = 0.123, t = 2.238, p < 0.05$), ($\beta = 0.211, t = 3.413, p < 0.001$), ($\beta = 0.109, t = 2.134, p < 0.05$), ($\beta = 0.176, t = 3.779, p < 0.001$), ($\beta = 0.177, t = 3.809, p < 0.001$), and ($\beta = 0.189, t = 3.033, p < 0.01$) respectively. 64% of variance in organizational performance could be stated by management leadership, strategic planning, human resources, service design, information and analysis, continuous improvement, and benchmarking. The values of R^2 have an acceptable level of explanatory power, indicating a substantial model [64, 65].

Table 3: Structural path analysis result.

Hypothesis	Relationship	Std Beta	SE	t-value	p-value	Decision	R^2
H1	ML→OP	0.098	0.047	2.105	0.018	Supported for all	0.64
H2	SP→ OP	0.123	0.055	2.238	0.013		
H3	HR→ OP	0.211	0.062	3.413	0.000		
H4	SD→ OP	0.109	0.051	2.134	0.017		
H5	IA→ OP	0.176	0.047	3.779	0.000		
H6	CI→ OP	0.177	0.046	3.809	0.000		
H7	BE→ OP	0.189	0.062	3.033	0.001		

Key: ML: management leadership, SP: strategic planning, HR: human resources, SD: service design, IA: information and analysis, CI: continuous improvement, BE: benchmarking, OP: organizational performance



Key: ML: management leadership, SP: strategic planning, HR: human resources, SD: service design, IA: information and analysis, CI: continuous improvement, BE: benchmarking, OP: organizational performance, OPF: financial, OPC: customer, OPIP: internal process, OPLG: learning and growth

Fig. 2. PLS algorithm results.

V. DISCUSSION

This current study was primarily conducted in order to evaluate the relation among TQM and performance of the organization. The mixed findings that led to inconsistent conclusions of the above variables' relationships have remained a crucial issue to be further examined. Moreover, it is universally acknowledged that TQM is significant practice, which when adopted successfully, can improve organization performance.

In the current study 7 hypotheses were developed to fulfill the main research objective which is examining the effect of TQMP on performance of the organization with respect to FABCO in UAE. The first objective was to examine the effect of TQM on organizational performance. Thus, H1 is supported with (β = 0.098, t = 2.105, p < 0.05).

This result is also supported by a research finding of Talib, Rahman, & Qureshi (2011) [38] which concluded that Management Leadership influenced organizational performance positively, and studies by Oakland & Tanner, 2008 [32] in which they indicated that Management Leadership has a significant positive impact on organizational performance.

Moreover, the second hypothesis was examined for testing the strategic planning impact on performance organization. The results stated there is a positive and direct effect of the strategic planning on performance with (β = 0.123, t = 2.238, p < 0.05), thus, H2 was supported. Findings come in line with Prajogo & Brown (2004) [35] who concluded that strategic planning is a driver of organizational performance. Furthermore, H3 was examined and supported with (β = 0.211, t = 3.413, p < 0.001), as the Human Resources has a direct positive effect on the organizational performance. This result also comes in line with prior studies i.e. [37, 38] who confirmed the importance of human resources to improve the performance of organizations. In addition, H4 was formulated as Service design has a positive effect on organizational performance, results from examining H4 was also supported with (β = 0.109, t = 2.134, p < 0.05). Results indicate that there is a direct positive effect of service design on the performance of the organization. This result is consistent with former researcher that stated service design is a good driver for improving the organizational performance. Also H5 was also formulated, examined, and supported with (β = 0.176, t = 3.779, p < 0.001). Results proven that Information and Analysis is a driver of the organizational performance. This result comes in line with Ismail Sila & Ebrahimpour (2005) [42] who also proved in their results the importance of Information and Analysis to improve the organizational performance. Finally, H6, and H7 were formulated to examine the effect of Continuous Improvement, and Benchmarking on the organizational performance, and examined to fulfill objectives six and seven. Results also were supported with $(\beta = 0.177, t = 3.809, p < 0.001)$, and $(\beta = 0.189, t = 3.033, p < 0.01)$ respectively. These results also were consistent with prior studies [44, 46, 66].

On the whole, sufficient TQM can be effectively relayed to all employees for acceptance and practice. Added to this, in FAPCO, there is an effective system that establishes a system that reviews in the short and long-term the objectives and policies to maintain its consistency with the employees' requirements and needs.

VI. IMPLICATIONS, LIMITATIONS ANDFUTURE DIRECTIONS

This study illustrated and highlighted the importance of both TQM and management of project in public service firms and it evaluated the unsolved problems with respect to TQM and performance of the organization. Moreover, the extension of literature regarding the impact of the TQM on the performance of the UAE public service firms. This is because studies of this caliber are confined to the manufacturing sector. Public service sector holds great importance to the economic development plans but notwithstanding this fact, prior studies have largely conducted conceptual, descriptive and observational studies when examining TQM in the public service sector. Thus, this study contributes to literature on the UAE public service sector in light of empirical findings on the study variables.

The study results also contributes to practice, with implications to both practitioner and policy-maker circles. The study primarily provided information and knowledge on the way TQM improve the performance of public service organizations. Under this sub-section the practical contributions are enumerated. One of the practical contributions is the study findings promotion of awareness of management of public service firms as to the significance of institutionalizing both project management and TQM. The results also highlights that one of the top survival mechanism of organizations and their key to achieving strategic competitive niche is by embracing entrepreneurial activities. The findings can guide owners and managers to lay down effective plans on how to be successful in implementing TQM for a successful entrepreneurial niche.

The above study contributions do not negate the fact that the study has its own limitations that are crucial to results interpretation and drawing of results. One of the limitations pertains to the study scope that was confined to the UAE public service sector firms, disregarding other firms. This may affect the results generalizability. Thus, it is suggested to include private sector in future studies to improve the generalizability of the results.

VII. CONCLUSION

In sum, public service sector performance has remained as one of the top issues hindering overall economic development and growth. In this regard, public organizations overall performance has been of top concern and debate among circles of decision-makers and practitioners in the developing nations, like UAE. The study construct of TQM has been acknowledged as the top effective strategies for organizations to adopt in bettering their performance and generating innovative products and services. This holds true for the UAE case, where TQM has been hailed as effective strategies despite its short history in the region. The study findings supported the significant influence of TQM on the performance of UAE public service firms. And although these management initiatives originated from the West, they can still be of great value in terms of enhancing and maintaining organizational performance in the UAE. Results would give insights for FABCO and public sector in the UAE to improve the organizational performance focusing in TQMP.

APPENDIX

Instrument for varibles

Varible	Measure	Source
Management Leadership (ML)	ML1: In our department, the top management has long-term quality plans. ML2: In our department, the top management has set up clear quality goals. ML3: In our regular meeting, the top management always focused on quality of the service and its deliverance. ML4: In our department, the top management encourages us to view quality of the service that is important than cost.	[30]
Strategic Planning (SP)	SP1: In our department, we have a mission statement which has been effectively communicated to all the employees and gained their support. SP2: In our department, we have a comprehensive planning process which sets and reviews short and long-term goals. SP3: Our plans focus on the achievement of the best practice in the other departments. SP4: When we develop our plans, policies, and objectives, we always incorporate customer requirements and the needs of all stakeholders, including the community.	[30]
Human Resources (HR)	HR1: In our department, suggestion of the employees are evaluated. HR2: In our department, we often work in teams, with members from a variety of departments. HR3: In our department, we use the ability to work in teams as a criterion in the employees' selection. HR4: In our department, employees' training is provided in quality principles. HR5: In our department, resources are available for employees training. HR6: In our department, the top management is often involved in quality training. HR7: In our department, employees are encouraged to take initiatives when dealing with customers' complaints. HR8: In our department, the problem-solving ability is a criterion for selecting employees. HR9: In our department, employees are given the resources necessary to deal with customers' complaints.	[30]

Service Design (SD)	SD1: It is the policy in our department to thoroughly review the new service designs before its marketing. SD2: In our department, the quality of the new service is more important than reducing the cost. SD3: When designing a new service, employees from different departments often participate in the process.	[30]
Information and Analysis (IA)	IA1: In our department, we have a program to reduce the time between receiving an order and its satisfaction. IA2: In our department, performance data is collected and analyzed on a regular basis. IA3: In our department, the information allows us to control and improve core processes and services. IA4: In our department, we receive timely information and the important data is presented and communicated to employees on a regular basis. IA5: In our department, information systems are always evaluated and improved.	[30]
Continuous Improvement (CI)	CI1: In our department, there is always an emphasis on the continuous improvement in all the activities at various levels. CI2: In our department, continuous improvement is emphasized in the training programs provided to employees. CI3: In our department's policies, improving quality is more important than the quantity and short term goals. CI4: In our department, all departments and stations believe that by implementing continuous improvement strategies, they can survive and serve better in the highly competitive environment.	[30]
Benchmarking (BE)	BE1: In our department, it is always emphasized that benchmarking is our strategy to achieve a better competitive position BE2: We visit other departments, locally and internationally, to investigate their practices. BE3: In our department, we conduct research to find out the best practices of other local and international policies.	[30]
Financial (OPF)	OPF1: Our department has good budget management OPF2: Operation in our department is not cost saving OPF3: Our department reduced the unit cost of service delivered	[66]
Customer (OPC)	OPC1: Our department has high community demand OPC2: Our department increased customer satisfaction OPC3: Our department improved on the timeliness of service delivered	[66]
Internal Process (OPIP)	OPIP1: Our department maintains a high level of motivation amongst employees. OPIP2: Our department successful in implementing employee development programs (training). OPIP3: Our department maintains a high level of employee health and safety. OPIP4: Our department has work climate support for obtaining the department's objectives.	[66]
Learning and Growth (OPLG)	OPLG1: Our department has successfully identified the emerging needs of customers/outside communities. OPLG2: Our department is responding quickly to changing customer demands. OPLG3: Our department utilizes the latest technology for increasing effectiveness OPLG4: Our department has successfully developed the procedure to improve the quality of service offered.	[66]

REFERENCES

[1]. Karuppusami, G. & Gandhinathan, R. (2006). Pareto analysis of critical success factors of total quality management: A literature review and analysis. *The TQM Magazine*, Vol. **18**, No. 4, PP. 372–385.

[2]. Ameen, A. & Ahmad, K. (2011). The Role of Finance Information Systems in anti-financial corruptions: A theoretical review, *In 11 International Conference on Research and Innovation in Information Systems* (ICRIIS'11), PP. 267–272.

[3]. Ameen, A. & Ahmad, K. (2013). A Conceptual Framework of Financial Information Systems to reduce corruption. *Journal of Theoretical and Applied Information Technology*, Vol. **54**, No. 1, PP. 59–72.

[4]. Vishnoi, S. (2019). An Empirical Investigation of ICT Implementation in Indian Schools. *Journal of Business, Management and Strategy*, Vol. **1**(1), pp. 1-7.

[5]. Hendricks, K.B. & Singhal, V.R. (2000). The impact of Total Quality Management (TQM) on financial performance: evidence from quality award winners".*Measuring Business Excellence,* Vol. **6**, No. 4, PP. 44-54.

[6]. Chen, Z. (2015). The relationships among JIT, TQM and production operations performance: An empirical study from Chinese manufacturing firms. *Business Process Management Journal*, Vol. **21**, No. 5, PP. 1015–1039.

[7]. Zatzick C.D., Moliterno T. & Fang T. (2012). Strategic (MIS)FIT: The implementation of TQM in manufacturing organizations. *Strategic Management Journal*, Vol. **33**, No. 11, PP. 1321-1330.

[8]. Dubey R. (2015). An insight on soft TQM practices and their impact on cement manufacturing firm's performance: Does size of the cement manufacturing firm matter? *Business Process Management Journal*, Vol. **21**, No. 1, PP. 2–24.

[9]. Lee C.Y. (2004). TQM in small manufacturers: an exploratory study in China. *International Journal of Quality & Reliability Management*, Vol. **21**, No. 2, PP. 175–197.

[10]. Munizu M. & Hasanuddin U. (2013). The Impact of Total Quality Management Practices towards Competitive Advantage and Organizational Performance : Case of Fishery Industry in South Sulawesi Province of Indonesia the Impact of Total

Quality Management Practices towards Competitive Advantage. *Pakistan Journal of Commerce and Social Sciences*, Vol. **7**, No. 1, PP. 184–197.
[11]. Vanichchinchaia A. & Igel B. (2011). The impact of total quality management on supply chain management and firm's supply performance. *International Journal of Pr. International Journal of Production Research,* Vol. **49**, No. 1, PP. 3405–3424.
[12]. Green Kenneth W.J, Abshire R.D, Zelbst J.P. & Sower E.V. (2014). Impact of RFID and information sharing on JIT, TQM and operational performance. *Management Research Review*, Vol. **37**, No. 11, PP. 970–989.
[13]. Zehir C., Ertosun Ö.G., Zehir S. & Müceldilli B. (2012). Total Quality Management Practices' Effects on Quality Performance and Innovative Performance. *Procedia - Social and Behavioral Sciences*, Vol. **41**, PP. 273–280.
[14]. Alkhateri A.S., Abuelhassan A.E., Khalifa G.S. A., Nusari M. & Ameen A. (2018). The Impact of perceived supervisor support on employee's turnover intention : The Mediating role of job satisfaction and affective organizational commitment. *International Business Management,* Vol. **12**, No. 7, PP. 477–492.
[15]. Aggarwal, R.K., Kaur, R., Bagga, T., & Bhardwaj, N., (2017). Cloud computing with special reference to Data Security. *International Journal of Control Theory and Application*. Vol. **10**, No. 4, PP. 233-240.
[16]. Bagga, T. (2012). A study on perception of various social networking sites with special reference to Delhi/NCR. *ZENITH International Journal of Business Economics & Management Research*, Vol. **2**, No. 10, PP. 64-79.
[17]. Bagga, T., & Bhatt, M. (2013). A Study of Intrinsic and Extrinsic Factors Influencing Consumer Buying Behaviour Online. *Asia-Pacific Journal of Management Research and Innovation*, Vol. **9,** No. 1, PP. 77-90.
[18]. Bagga, T., Sodhi, J., Shukla, B., Qazi, M. (2017). Smartphone Security Behaviour of the Indian Smartphone User. *Man In India*, Vol. **97**, No. 24, PP. 333-344.
[19]. Addanki, A., Pandey, V., Sodhi, J. Bagga, T., (2017). Next Generation Indian Campuses going SMART. *International Journal of Applied Business and Economic Research*, Vol. **15**, No. 21, PP. 385-398.
[20]. Chamchong, A. & Wonglorsaichon, P. (n.d.). The Definition, Development and Dimensions of Corporate Identity. *University of the Thai Chamber of Commerce,* PP. 526-534.
[21]. Demirbag, M., Tatoglu, E. & Zaim, S. (2006). An analysis of the relationship between TQM implementation and organizational performance Evidence from Turkish SMEs. *Journal of Manufacturing Technology Management*, Vol. **17**, No. 6.
[22]. Petroni, A. (2002). Critical factors of MRP implementation in small and medium-sized firms. *International Journal of Operations & Production Management*, Vol. **22**, No. 3, PP. 329–348.
[23]. Sharma, U. & Hoque, Z. (2002). TQM implementation in a public sector entity in Fiji: Public sector reform, commercialization, and institutionalism. *International Journal of Public Sector Management*, Vol. **15**, No. 5, PP. 340–360.
[24]. Sila I. (2007). Examining the Effects of Contextual Factors on TQM and Performance through the Lens of Organizational Theories: An Empirical Study. *Journal of Operations Management*, Vol. **25**, No. 1, PP. 83–109.
[25]. Tripathi D. (2005). Influence of experience and collaboration on effectiveness of quality management practices: The case of Indian manufacturing. *International Journal of Productivity and Performance Management*, Vol. **54**, No. 1, PP. 23–33.
[26]. Gibson P. & Abusa F.M. (2013). TQM implementation in developing countries: A case study of the Libyan industrial sector. *Benchmarking: An International Journal*, Vol. **20**, No. 5, PP. 693–711.
[27]. Guest D.E. (1997). Human resource management and performance: a review and research agenda. *The International Journal of Human Resource Management*, Vol. **8**, No. 3, PP. 263–276.
[28]. Rao. M. (2019). Study of Financial Inclusion - Pre & Post Demonetization in India. *Journal of Business, Management and Strategy*, Vol.**1**(1), pp. 21-30.
[29]. Stahl M.J. (1995). Management: Total Quality in a Global Environment. *Wiley.*
[30]. Oriaku N. & Oriaku E. (2008). The Effect of Total Quality Management on Leadership: Case of Nigeria. *International Business & Economics Research Journal*, Vol. **7**, No. 1, PP. 35–46.
[31]. Ginn D., Zairi M. & Al-Mashari M. (2005). Key enablers for the effective implementation of QFD: a critical analysis. *Industrial Management & Data Systems*, Vol. **105**, No. 9, PP. 1245–1260.
[32]. Oakland J.S. & Tanner S.J. (2008). The relationship between Business Excellence and Performance – An empirical study using Kanji's Leadership Excellence Model. *Total Quality Management & Business Excellence*, Vol. **19**, No. 7–8, PP. 733–749.
[33]. Subrahmanya B.K. & Rajashekhar J. (2009). An empirical study of barriers to TQM implementation in Indian industries. *The TQM Journal*, No. **21**, No. 3, PP. 261–272.
[34]. Vouzas F. & Psychogios A. (2007). Assessing managers' awareness of TQM Assessing Managers' Awareness of Total Quality Management. *The TQM Magazine*, Vol. **19**, No. 1, PP. 62–75.
[35]. Prajogo D.I. & Brown A. (2004). The Relationship between TQM Practices and Quality Performance and the Role of Formal TQM Programs. *Quality Management Journal,* Vol. **11**, No. 4, PP. 31-42.
[36]. Hussain H.K., Talib N.A. & Shah I.M. (2015). Application of Structural Equation Modelling to Evaluate Relationship between Dimensions of Transformational Leadership and Organizational Innovation: in Iraq public universities. *Global Journal of Business and Social Science Review (GJBSSR)*, Vol. **1**, No. 1, PP. 107–115.
[37]. Talib F., Rahman Z. & Qureshi M. (2010). The relationship between total quality management and quality performance in the service industry: A theoretical model. *International Journal of Business, Management and Social Sciences*, Vol. **1**.
[38]. Talib F., Rahman Z. & Qureshi M.N. (2011). A study of total quality management and supply chain management practices. *International Journal of Productivity and Performance Management*, Vol. **60**, No. 3, PP. 268–288.
[39]. Brah S.A., Wong J.L., & Rao B.M. (2000). TQM and business performance in the service sector: A Singapore study. *International Journal of Operations & Production Management*, Vol. **20**, No. 11, PP. 1293–1312.
[40]. Emdad A. F. & Bhatt G.D. (2010). An empirical examination of the relationship between Information Technology (IT) infrastructure, customer focus, and business advantages. *Journal of Systems and Information Technology*, Vol. **12**, No. 1, PP. 4–16. https://doi.org/10.1108/13287261011032625

[41]. Ahire S.L., Golhar D. & Waller M. (1996). Developing and Validation of TQM Implementation Constructs. *Decision Sciences,* Vol. **27,** No. 1, PP. 23-56.
[42]. Sila Ismail & Ebrahimpour M. (2005). Critical linkages among TQM factors and business results. *International Journal of Operations & Production Management*, Vol. **25**, No. 11, PP. 1123–1155.
[43]. Flynn B.B., Schroeder R. & Sakakibara S. (2007). The Impact of Quality Management Practices on Performance and Competitive Advantage. *Decision Sciences,* Vol. **26**, No. 5, PP. 659-691.
[44]. Fotopoulos C.V. & Psomas E. (2010). The structural relationships between TQM factors and organizational performance. *The TQM Journal*, Vol. **22,**No. 5, PP. 539-552.
[45]. Anderson J.C. & Gerbing D.W. (1988). Structural Equation Modeling in Practice: A Review and Recommended Two-Step Approach. *Psychological Bulletin*, Vol. **103**, No. 3, PP. 411–423.
[46]. Yusuf Y., Gunasekaran A. & Dan G. (2007). Implementation of TQM in China and Organisation Performance : An Empirical Investigation. *Total Quality Management and Business Excellence*, Vol. **18**, No. 5, PP. 509–530.
[47]. Antony J., Leung K., Knowles G. & Gosh S. (2002). Critical success factors of TQM implementation in Hong Kong industries. *International Journal of Quality & Reliability Management*, Vol. **19**, No. 5, PP. 551–566.
[48]. Gundersen D.E. & Behara R.S. (2001). Analysis of quality management practices in services. *International Journal of Quality & Reliability Management*, Vol. **18**, No. 6, PP. 584–604.
[49]. Wernerfelt B. (1984). "A resource-based view of the firm".*Strategic Management Journal*, Vol. **5**, No. 2, PP. 171–180.
[50]. Creswell J.W. (2003). Research design Qualitative quantitative and mixed methods approaches. *Research Design Qualitative Quantitative and Mixed Methods Approaches*, PP. 3–26.
[51]. Aldholay A.H., Isaac O., Abdullah Z. & Ramayah T. (2018). The Role of Transformational Leadership as a Mediating Variable in DeLone and McLean Information System Success Model: The Context of Online Learning usage in Yemen. *Telematics and Informatics*, Vol. **35,** No. 5, PP. 1421-1437.
[52]. Aldholay A.H., Abdullah Z., Ramayah T., Isaac O. & Mutahar A.M. (2018). Online learning usage and performance among students within public universities in Yemen. *International Journal Services and Standards*, Vol. **12**, No. 2, PP. 163–179.
[53]. Mutahar A.M., Daud N.M., Ramayah T., Isaac O. & Alrajawy I. (2017). Examining the intention to use mobile banking services in Yemen: an integrated perspective of technology acceptance model (TAM) with perceived risk and self-efficacy. *Asian Journal of Information Technology*, Vol. **15**, No. 12.
[54]. Ringle C.M., Wende S. & Becker J.M. (2015). SmartPLS 3.*Bonningstedt: SmartPLS*.
[55]. Schumacker R.E. & Lomax R.G. (2004). A Beginner's Guide to Structural Equation Modeling. *New York: Lawrence Erlbaum*.
[56] Hair J. F., Black W. C., Babin B. J. & Anderson R. E. (2010). Multivariate Data Analysis. *New Jersey.*
[57]. Hair J. F. J., Hult G. T. M., Ringle C., & Sarstedt M.A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM), 46 Long Range Planning § (2014). *London: Thousand Oaks: SAGE*.
[58]. Kannana V.R. & Tan K.C. (2005). Just in time, total quality management, and supply chain management: understanding their linkages and impact on business performance. *Omega: The International Journal of Management Science*, Vol. **33**, No. 2, PP. 153–162.
[59]. Werts C.E., Linn R.L. & Jöreskog K.G. (1974). Intraclass reliability estimates: Testing structural assumptions. *Educational and Psychological Measurement*, Vol. **34**, No. 1, PP. 25–33.
[60]. Kline R.B. (2010). Principles and practice of structural equation modeling (3rd ed.). *New York: The Guilford Press*.
[61]. Gefen D., Straub D. & Boudreau M.C. (2000). Structural equation modeling and regression: Guidelines for research practice. *Communications of the Association for Information Systems*, Vol. **4**, No. 1, PP. 1–79.
[62]. Fornell C. & Larcker D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, Vol. **18**, No. 1, PP. 39–50.
[63]. Chin W.W. (1998). Issues and opinion on structural equation modeling. *MIS Quarterly*, Vol. **22**, No. 1, PP. 7–16.
[64]. Cohen J. (1988). Statistical Power Analysis for the Behavioral Sciences (2nd Edition). *Lawre Associatesnce Erlbaum*.
[65]. Chin W.W. (1998b). The partial least squares approach to structural equation modeling. In G.A. Marcoulides (Ed.). *Modern methods for business research* (PP. 295-358). New Jersey: Lawrence Erlbaum Associates. Mahwah, NJ: Lawrence Erlbaum.
[66]. Abu-Qouod G. (2006). The Role of Strategic Management towards Improving Institutional Performance in Public Organizations in the Hashemite Kingdom of Jordan. *Cairo University-Egypt*.