

Impact of soft TQM practices on employee work role performance: role of innovative work behaviour and initiative climate

Impact of soft
TQM practices

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Abstract

Purpose – The purpose of this paper is to investigate the effect of soft total quality management (TQM) practices on employee work role performance in the manufacturing sector of United Arab Emirates. It also examined the indirect effect of innovative work behaviour and initiative climate.

Design/methodology/approach – The study is based on a conclusive research design and survey data was collected from 290 employees working in non-managerial positions across various manufacturing companies in UAE. The hypotheses of the empirical study are tested using structural equation modelling. The indirect effects created through moderated mediation are analysed using Hayes Process Macro.

Findings – The results show that soft TQM practices have a positive influence on work role performance. Employee innovative work behaviour acts as a partial mediator and initiative climate moderates the relationship.

Research limitations/implications – The study adopted a cross-sectional analysis and single informants are used, so it is advised that the interpretation of the results is made with enough caution.

Practical implications – Practitioners must bear in mind that when the employees are adequately trained, empowered, involved and organized as team, it would result in employee innovative behaviour and improved work role performance. The top management should be persuaded to be more committed to the above-mentioned activities for more positive employee-level outcomes.

Originality/value – Very few studies have conducted an empirical validation at the intersection of human resource management (HRM) and TQM. This is one of the first studies to examine the relationship between soft TQM and employee work role performance.

Keywords Total quality management, Initiative climate, Innovative work behaviour, Work role performance

Paper type Research paper

1. Introduction

Traditionally, employees are required to perform a specific role in contributing to the organizational performance. The changing nature of work climate has prompted for expansion of work roles from fixed tasks to dynamic organizational contexts (Saffar and Obeidat, 2020; Ilgen and Pulakos, 1999; Fritz and Sonnentag, 2009). The interdependence and uncertainty of work demands new set of responsibilities such as proactive, adaptive and contextual performance (Agus and Selvaraj, 2020; Pulakos *et al.*, 2000; Parker *et al.*, 2006; Borman and Motowidlo, 1997). Work roles are defined as the entire set of responsibilities related to one's employment (Smith *et al.*, 1999) and the work role performance is all about the proficiency with which an individual carries them out. Work roles are context specific, as role theory describes the nexus between organizational context and individual behaviour (Morgeson *et al.*, 2005). The present study follows Griffin *et al.* (2007)'s classification of work



role performance dimensions based on the formalized and emergent roles: proficiency, adaptivity and proactivity across all three levels of understanding such as individual, team and organizational level. Proficiency is the degree to which an employee meets the requirement of work role that can be formalized. Adaptivity is degree to which an employee adapts to the ongoing changes in the work roles and lastly proactivity is the degree to which an employee initiates change. Each of these dimensions would play a different role based on the degree of the uncertainty and formalization of the job at hand.

Research on total quality management (TQM) practices is of strategic relevance to organization in terms of achieving competitive advantage and improving firm performance (Hendricks and Singhal, 2001; Saffar and Obeidat, 2020). Academic literature of TQM is twofold – one is more technical or hard TQM and the other is more intangible or soft TQM (Bou-Llusar *et al.*, 2009). Hard TQM focuses on the problem-solving methods, statistical process control charts, process improvement, whereas soft TQM deals with top management commitment, team work and empowerment (Fotopoulos and Psomas, 2009; Agus and Selvaraj, 2020). Most of the human resource management (HRM) practices are effective when combined with soft TQM principles (Akdere, 2007). Anderson and Sohal (1999) argued that when both the approaches are compared, soft TQM is mainly responsible for increase in firm performance, due to the effect of resource-based view (Barney, 1991). Implementation and evaluation of the corresponding outcomes related to TQM practices may take a considerable time. Individual-level perceptual measures may provide immediate effects of TQM (Shrivastava *et al.*, 2006; Krajcsák, 2019; Morrow, 1997). Numerous studies focused on the effect of soft TQM and organizational outcomes, but very few studies focused on employee-level outcomes. Also, the major emphasis of individual-level outcomes of TQM studies has been on customer satisfaction (Karia and Abu Hasan Asaari, 2006; Guimaraes, 1996).

Innovation in the organization is an outcome of significant interactions among the employees at multiple levels (Kabasheva *et al.*, 2015). Innovative behaviour is the voluntary process from idea generation to realization displayed by the employees to improve their work role and work unit performance (Janssen, 2003). Employee's intellectual ability and push from the external environment shapes the innovative behaviour (Awan *et al.*, 2017; Mumford *et al.*, 2002). Innovative behaviour may or may not always lead to positive organizational outcomes, but the perception of the majority is inclined towards positive outcomes (Blouch and Aseem, 2019). Top management should support and motivate their employees by exhibiting model behaviour, such that the problem-solving skills would be cultivated among the employees (Schuckert *et al.*, 2018).

Employees perform their work duties in an organizational setting and organizational climate acts as a situational factor in shaping attitudinal perceptions and behavioural patterns (Raub and Liao, 2012). Positive organizational climate prompts the employees to come up with personal initiatives, thereby enriching the initiative climate (Liao and Rupp, 2005). Initiative climate deals with the employee shared perceptions of change oriented, self-starting and persistent behaviour, which foster employee proactive behaviour (Wihler *et al.*, 2017). Initiative climate draws from the person situation theory that employee motivation to perform is influenced by various barriers and reinforcements from the surrounding environment (Pervin, 1989). High levels of initiative climate lead to change orientation and self-initiation, whereas low levels of initiative climate lead to restricting employees to job crafting (Hong *et al.*, 2016).

Therefore, the present study aims to investigate the effect of soft TQM practices on internal customers, as in employees without which external customer satisfaction cannot be achieved and hence, work role performance is studied as an outcome variable. Past research reveals that there are very few empirical studies which focused on positive employee-level outcomes and are only limited to job satisfaction (Soltani *et al.*, 2006; Krajcsák, 2019). Most of the studies are conceptual in nature or followed a case study approach (Yang, 2006). The study sheds light on the association between soft TQM principles and organizational behaviour by examining the outcomes such as employee innovative behaviour and work role

performance, thereby contributing to the advancement of the intersection between the two areas. Therefore, the study aims to address the following research questions:

- RQ1. To what extent the soft TQM practices impact work role performance?
- RQ2. To what extent employee innovative work behaviour mediates the relationship between soft TQM practices and work role performance?
- RQ3. To what extent initiative climate moderates the relationship between soft TQM practices and employee innovative work behaviour?

2. Theoretical background and hypothesis development

2.1 Soft TQM practices and employee work role performance

Soft TQM practices integrates various functions across the business so that all the activities starting from design to distribution focuses on improving customer satisfaction through continuous improvement, thereby achieving competitive advantage (Škarica and Vrtodušić Hrgović, 2021; Powell, 1995; Dessler and Yang, 2003). While there is no common agreement on the exhaustive set of Soft TQM practices, the present study has considered five dimensions such as top management commitment, empowerment, training, involvement and teamwork (Hietschold *et al.*, 2014; Chang *et al.*, 2010; Ooi *et al.*, 2012). Top management's role is crucial in creating a stimulating work environment in the organization such that employees could leverage on it to attain their continuous improvement goals, thereby increasing the organizational performance (Abdallah and Phan, 2007; Phan *et al.*, 2019). Empowerment deals with the ethos of TQM emphasizes on the delegation of responsibility from top management to the lower level management, who are instrumental in the implementations of various processes (Dimitmades, 2001), so that they are empowered. Psychologically empowered employees display higher self-efficacy, active orientation towards their roles and increased responsibility (Spreitzer, 1995). Training is a key success factor to achieve organization's performance strategy and helps to maintain the quality of the current workforce, increase productivity, improve employee relations and decrease turnover (Khoury and Analoui, 2010; Goetsch and Davis, 2013). Employee involvement deals with displaying responsibility and participation at work by team work, decision making and improving the activities (Evans and Lindsay, 2002). Higher involvement results in increased productivity, morale and customer satisfaction (Albuhisi and Abdallah, 2018). Teamwork plays an important role in TQM implementation and is effective only when there is a seamless integration of various business functions and the teams formed out of it (Hackman and Wageman, 1995). Successful TQM implementations calls for a change in the organizational structure from individualistic to team based (Daily and Bishop, 2003). High performing work teams improve organizational effectiveness and quality of work life of employees (Almaraz, 1994). TQM implementations help to satisfy the firm's internal customers (employees), which increases the employee satisfaction (Hwang *et al.*, 2020), firm performance (Jung and Hong, 2008; Dubey and Gunasekaran, 2015), impact positive employee attitudes (Keng Boon *et al.*, 2005) and employee commitment (Arunachalam and Palanichamy, 2017). Very few studies have focused on the employee levels performance variables as an outcome of TQM practices.

Work roles are referred to as the complete set of performance responsibilities related to one's employment (Murphy and Jackson, 1999). Positive work role behaviours are studied at individual, team and organizational levels with three broad dimensions such as proficiency, adaptivity and proactivity (Griffin *et al.*, 2007). Individual task proficiency ensures the proper completeness of core tasks, individual task adaptivity is related to the degree of adjustment to new processes with in the core tasks and lastly individual task proactivity deals with the better way of doing core tasks (Griffin *et al.*, 2007). Individual task proficiency can be improved based on the training and development activities implemented in the organization and the efforts

displayed by the top management in creating a stimulating work environment (Strauss *et al.*, 2009). Individual task adaptivity tends to get impacted by team work (Kozlowski and Bell, 2007). Individual task proactivity is influenced by the employee empowerment and involvement initiatives (Erkutlu and Chafra, 2012). This behaviour is self-starting, change oriented and future focused when compared to the other two work role performance measures (Parker *et al.*, 2006).

Most of the evidence in literature is related to the association between soft TQM practices and employee/organizational performance and very few studies focused on employee role performance (Valmohammadi and Roshanzamir, 2015; Gözükarar *et al.*, 2019). The success of soft TQM to improve quality and productivity largely depends upon the cooperation among the people. When employees are provided with rules and regulations, adequate training and teamwork opportunities, there is a potential chance that it can enhance employee role performance (Sadikoglu and Zehir, 2010; Krajcsák, 2019). Evidence from the past studies reveal that soft TQM practices influence a range of positive employee outcomes such as employee involvement, satisfaction, commitment, productivity, adoption, empowerment, motivation, participation, morale, work-related attitudes and engagement (Amin *et al.*, 2017; Babu and Thomas, 2021; karia and Saleh, 2021). The present study tries to add another variable such as work role performance, to the list which has been given considerably less attention. Thus, the study postulates:

- H1. There is a positive relationship between soft TQM practices and employee work role performance.

2.2 Mediating role of employee innovative work behaviour

The association between TQM and innovation has argued vice-versa in the TQM literature (Prajogo and Sohal, 2001; Feng *et al.*, 2006). The arguments support both positive and negative relationship between TQM and innovation. Positive arguments postulate that firms implementing TQM practices create a culture which is fertile for innovation. Flynn (1994) underlined the positive association between quality management and the speed of product innovation. McAdam and O'Neill (1999) commented that implementation of continuous improvement activities over a period of time would result in improved innovation performance. Baldwin and Johnson (1996) stated that adoption of TQM practices would act as a deal breaker between innovative firms and less innovative firms. Negative association between TQM practices and innovation claims that TQM implementations would limit the firms only to mere incremental improvements and hinder them to create novel solutions (Saffar and Obeidat, 2020; Wind and Mahajan, 1997). TQM is also said to be limiting the creative potential due to formalization and make the firms followers than leaders due to risk avoidance (Prajogo and Sohal, 2001). Nevertheless, the universal nature of TQM practices and lack of adequate empirical evidence have subsided the negative association with innovation. It is argued that top management in an organization is vital for creating a culture of innovation, by empowering the operational-level employees to execute programs and make decisions (Garcia-Morales *et al.*, 2008; Rahman, 2002). Employee involvement from all levels of the organization is crucial in any TQM effort and if created right rewarded systems, it would enhance the innovative behaviour in the organization (Garcia-Morales *et al.*, 2008; Agus and Selvaraj, 2020). Creating opportunities such as training, employee empowerment and involvement in organization would potentially cultivate innovative behaviour (Woodman *et al.*, 1993).

Innovative work behaviour (IWB) is referred to as an individual's intentional initiation of a new or useful idea in order to improve an existing product or process (Farr and Ford, 1990; Pukkeeree *et al.*, 2020). It is a multi-stage and iterative process from idea generation to implementation (Scott and Bruce, 1994; Akram *et al.*, 2020). De Jong and Hartog (2010) highlighted four sequences of steps attributing to IWB such as problem recognition, idea generation, promotion and realization. These creative and implementation-oriented work

behaviours, if promoted among the colleagues and realized by managers, would potentially improve the work role performance (Leong and Rasli, 2014). Yuan and Woodman (2010) claim that human behaviour largely depends on the expected outcomes of behaviour and in a similar vein, IWB is also determined based on the performance as a desired outcome. Role theory states that performance at work is based on social norms, internal and external expectations, which are related to social sanctions and rewards. In the absence of these social norms, individual's self-efficacy and initiation make him proactive (Bandura, 2005). The casual relationship between innovation and performance has been quite established in the literature, especially at an organizational level (Damanpour and Evan, 1984; Rosenbusch et al., 2011) and less established at an individual level (Dörner, 2012). Based on the evidence gathered from the literature, the study attempts to understand the effect of IWB on work role performance. Thus, the study hypothesizes:

H2. Employee IWB mediates the relationship between soft TQM practices and employee work role performance.

2.3 Moderating role of initiative climate

Employees tend to get influenced by the internal environmental of the organization, right from psychological cognition to behaviour generation (Salancik et al., 1978; Li et al., 2021). The internal environment is referred to as organizational climate, which acts as a situational factor, in shaping the expected behavioural patterns (Raub and Liao, 2012) and craft few aspects of the employee job roles. Initiative climate, which is a type of organizational climate, focuses on employee shared perceptions about the encouragement and reward systems put forth by the management to foster change orientation, persistent and pro-active behaviour (Jadon and Upadhyay, 2018). The initiative climate is drawn from the person-situation theory, which proposes that the internal organizational environment either acts as reinforcer or barrier in the process employee meeting the set goals (Pervin, 1989). High levels of initiative climate prompt the employees to be more self-initiated and change oriented with regard to the soft TQM practices such as training, teamwork, involvement and empowerment. These aspects would potentially contribute to display innovative behaviour at work. On the contrary, low levels of initiative climate would make the self-initiated behaviour undesired and would lead to counter productive work behaviour rather than IWB. Consequently, soft TQM practices will begin to appear as work stressors with stringent formalization and standardization and may result in employee attrition (Obeng et al., 2020). Thus, the study postulates (see Figure 1):

H3. Initiative climate in the workplace moderates the relationship between soft TQM practices and employee IWB.

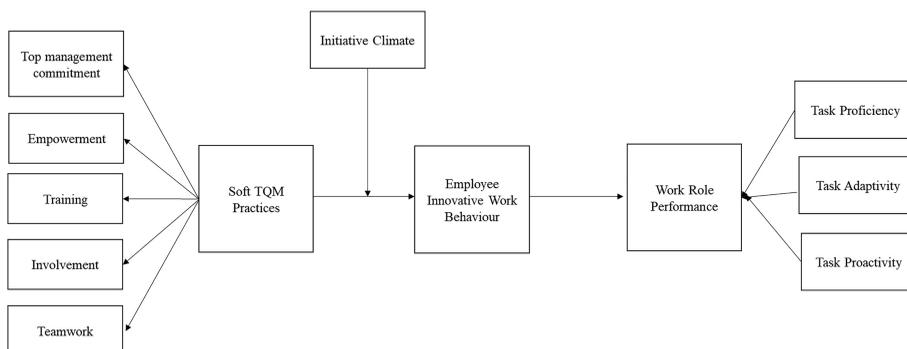


Figure 1. Proposed research framework

3. Research method

3.1 Sample and data collection

The data was collected through a self-administered questionnaire. The respondents were non-managerial employees working in the select manufacturing companies in United Arab Emirates. The questionnaire was administered in offline mode and was in English as English is understood and used as common mode of communication. Respondents were assured that their identity will be kept secret and only aggregate score will have unveiled. To handle social-desirability bias, the questionnaires were made anonymous. The questionnaire did not ask the name of the respondent, to make the response anonymous. Other demographic information like gender, age, experience, education was kept in the demographic section. In a duration of 10 weeks, 420 questionnaires were distributed and 310 were received filled. 20 were found to be incomplete, leading to a response of 290 respondents and response rate of 69.04%. [Table 1](#) highlights demographic properties of the sample.

Categories (<i>n</i> = 290)	Frequency (s)	Percentage
<i>Gender</i>		
Male	178	61.37
Female	112	38.62
<i>Age (in years)</i>		
Below 20	20	6.89
20–29	74	25.52
30–39	83	28.62
40–49	91	31.38
50 and above	22	7.58
<i>Education</i>		
Undergraduate	60	20.69
Graduate	150	51.72
Post graduate	80	27.58
<i>Work experience (in years)</i>		
0–10	102	35.17
11–20	114	38.62
21 and above	74	25.52

Table 1.
Respondent's profile

3.2 Measurement

IWB was measured by employing [Janssen's \(2000\)](#) scale that encompasses the three stages of innovation: (1) idea generation (3 items), (2) idea promotion (3 items) and (3) idea realization (3 items). All items were scored using a seven-point rating scale ranging from "never" (1) to "always" (7). The Cronbach α score for this scale was 0.95. Soft TQM practices were measured with 25-items scale by [Powell \(1995\)](#). All items were scored using a seven-point rating scale ranging from "never" (1) to "always" (7). Sample items are "Quality principles included in our mission statement"; "Increasing the organisation's direct personal contacts with customers" and "Requiring suppliers to meet stricter quality specifications". To measure initiative climate a 7-items developed by [Baer and Frese \(2003\)](#) were used. Sample items are "People in our company take initiative immediately—more often than in other companies"; "People in our company use opportunities quickly in order to attain goals;" and "People in our company usually do more than they are asked to do". Work role performance was measured with scale by [Griffin and associates \(2007\)](#). For the current study, our interest lies in the manifestation of these three behaviours at the individual level. We included nine items measuring the

subdimensions of proficiency (“Carried out the core parts of the job well”), adaptivity (“Adapted well to changes in core tasks”) and proactivity (“Initiated better ways of doing core tasks”). Leaders rated the frequency of these follower behaviours on a 7-point Likert-type scale, with anchors ranging from never to almost always.

3.3 Analysis and results

Data analysis is carried out using IBM SPSS 20.0 and AMOS 20. In this context, CFA was performed to confirm the validity of the factors as the scales were already established and tested in various contexts. To test the model fit, normed fit index (NFI), goodness-of-fit index (GFI), adjusted goodness-of-fit index (AGFI), Tucker Lewis Index (TLI), comparative fit index (CFI), standardized root mean square residual (SRMR) and root mean square of approximation (RMSEA) were calculated. For RMSEA, the acceptable value is ≤ 0.05 ; for NFI, GFI, TLI, CFI and AGFI, the acceptable value is between 0.80 and 0.99. The Pearson correlation is used to understand the relationship between various variables, and hierarchical multiple regression is used to test the hypotheses. Mediation and moderated mediation analyses are performed using the SPSS macro PROCESS Model 4 and 7 respectively developed by Hayes (2013). In order to check the presence of the common method bias (CMB), the study used Harman’s single factor approach (Podsakoff *et al.*, 2003) and found that the no single factor emerged of unrotated factor structure which is more than 50% and hence no CMB (see Table 2).

As previous researches have used soft TQM practices uni-dimensional, multi-dimensional and latent construct; it had to be tested first, which model suits our data. For this, the three models were compared using model fit indices. Table 3 shows the comparison. Uni-dimensional model was not found fit on some of the measures. Whereas second-order model was found to be superior in relation to first-order model on fit indices.

3.3.1 Confirmatory factor analysis. Table 4 shows mean, standard deviation and correlation of all variables under study. These results indicate shows a good model fit. All measures reveal a composite reliability (CR) value greater than 0.7, which provides reliability of the measures. The loading of all the items is found to be significant, and some items are dropped for deriving good results. As per Anderson and Gerbing (1988), significant factor loading and high CR provide convergent validity; specifically, AVE should be above 0.5 but less than CR value (Hair *et al.*, 2012), which holds true in this case (Table 4). For discriminant validity analysis, the square root of AVE should be greater than the coefficients of correlation with other constructs (Fornell and Larcker, 1981); this can be confirmed from Table 4. Also, the correlation table showcases the significant relation between all the variables.

3.3.2 Mediation analysis. As mentioned in Table 5, direct effect of STP ($\beta = 0.46, p < 0.001$) as well as IWB’s impact on WRP ($\beta = 0.37, p < 0.001$) was found positive. Hence, H1 was supported. The total indirect effect ($\beta = 0.29, p < 0.001$) led to total effect of $\beta = 0.76, p < 0.01$. The Sobel test demonstrates a significant indirect effect (Sobel $z = 2.68, p < 0.001$). Therefore, the mediation was supported and hence, the H2.

3.3.3 Moderated mediation analysis. The results in Table 5 show that soft TQM practices, initiative climate, IWB and interaction term of soft TQM and initiative climate are significant predictors of WRP ($p < 0.01$).

The conditional indirect effect test shows that IWB is a significant mediator between soft TQM practices and WRP at all the three levels of moderation by initiative climate. Although, all three levels show positive and significant score of initiative climate’s influence; but, it increased with increase in level from mean $-S.D.$ to mean and then to mean $+S.D.$ It showcases, with increase in initiative climate, the mediation by IWB get stronger every time. Therefore, H3 is supported.

TQM	Scale items	Factor loading	Composite reliability
	<i>Top management commitment</i>		0.85
	TMC1	0.71	
	TMC2	0.77	
	TMC3	0.82	
	TMC5	0.69	
	TMC6	0.77	
	<i>Empowerment</i>		0.85
	E1	0.70	
	E2	0.79	
	E3	0.74	
	E4	0.79	
	<i>Training</i>		0.86
	T1	0.871	
	T2	0.693	
	T3	0.769	
	T4	0.737	
	<i>Involvement</i>		0.91
	IV1	0.92	
	IV2	0.90	
	IV3	0.91	
	IV4	0.88	
	IV5	0.89	
	<i>Teamwork</i>		0.83
	TW1	0.80	
	TW2	0.81	
	TW3	0.86	
	<i>Innovative work behavior</i>		0.86
	I1	0.78	
	I2	0.82	
	I3	0.80	
	I4	0.77	
	I5	0.79	
	I6	0.88	
	I7	0.72	
	I8	0.70	
	I9	0.73	
	<i>Work role performance</i>		0.83
	W1	0.77	
	W2	0.79	
	W3	0.78	
	W4	0.82	
	W5	0.84	
	W6	0.78	
	W7	0.77	
	W8	0.79	
	W9	0.80	
	<i>Initiative climate</i>		0.88
	IC1	0.87	
	IC2	0.80	
	IC3	0.88	
	IC4	0.81	
	IC5	0.88	
	IC6	0.75	
	IC7	0.77	

Table 2. Psychometric properties of the scale **Note(s):** CR = Composite Reliability

Goodness of fit measures	First-order model	Second-order model	Uni-dimensional model
χ^2 test statistics/df	0.89	0.95	0.86
GFI	0.91	0.93	0.90
AGFI	0.93	0.95	0.91
TLI	0.94	0.95	0.88
CFI	0.94	0.95	0.79
NFI	0.91	0.92	0.80
RMSEA	0.045	0.035	0.62
SRMR	0.02	0.012	0.07

Note(s): normed fit index (NFI), goodness-of-fit index (GFI), adjusted goodness-of-fit index (AGFI), Tucker Lewis Index (TLI), comparative fit index (CFI), standardized root mean square residual (SRMR) and root mean square of approximation (RMSEA)

Table 3. Goodness-of-fit measures comparison of proposed models

	Mean	S.D.	CR	AVE	MSV	ASV	1	2	3	4
STP (1)	5.14	0.78	0.82	0.52	0.25	0.10	0.72			
Initiative climate (2)	5.10	0.83	0.81	0.60	0.22	0.12	0.24**	0.77		
IWB (3)	6.10	0.85	0.73	0.55	0.19	0.07	0.31**	0.25**	0.74	
WRP (4)	5.20	0.71	0.81	0.56	0.20	0.14	0.38**	0.33**	0.42**	0.75

Note(s): * = $p < 0.05$, ** = $p < 0.01$, S.D. = standard deviation, STP= soft TQM practices, IWB = innovative work behaviour, WRP = work role performance

Table 4. Descriptive analysis, correlations and discriminant validity

4. Discussion

The study focussed on understanding the relationship between soft TQM practices and work role performance of employees. The result section also focused on analysing the impact of the soft TQM practice on WRP through mediated route through IWB. Also, moderation by initiative climate of the mediated bath is tested in the study. The first hypothesis focused on relation between SQP and WRP. The results confirmed the direct effect between soft TQM practices and WRP in confirmation with [Erkutlu & Chafra \(2012\)](#). It shows effect of organizational initiatives on individual outcomes. Previous studies ([Keng Boon et al., 2005](#); [Arunachalam and Palanichamy, 2017](#); [Hwang et al., 2020](#)) focused on employee behavior and organizational output ([Jung and Hong, 2008](#); [Dubey and Gunasekaran, 2015](#)) as an outcome of soft TQM practices but none of them focussed on individual performance. Hence, the present study made a significant enquiry in the domain. The positive results establish that the developmental actions of leader towards followers have direct impact on firm's output not only in terms of production but also how followers serve the customers or how they control the wastages. High SQP shows organization's commitment to improve the system, for which they engage in training, teamwork, empowerment and involvement because this mammoth task requires co-ordinated efforts of everyone. These initiatives automatically increase work performance of employees as they start feeling more connected to work and workplace.

H2 was focussed on mediation by IWB between STP and WRP; which was supported by data. It indicates that STP positively influences innovative work by employees. Present study is in sync with [Flynn \(1994\)](#) and [McAdam & O'Neill \(1999\)](#), which supported idea of TQM positively supporting innovation in organization and against studies like [Prajogo and Sohal \(2001\)](#). IWB has more to do with adoption of innovative methods in work and behavior. STP practices contained many factors which support employees in implementation of innovative ideas like top commitment, involvement, empowerment, training, etc. Therefore, the positive relationship. In continuation, IWB allows employees to

TQM

Total effect					
Predictor	Outcome	B(SE)	95% CI	<i>t</i> value	
STP(X)	WRP(Y)	0.76 (0.03)	[0.70, 0.83]	23.44***	
Direct effect					
Predictor	Outcome	B(SE)	95% CI	<i>t</i> value	
STP(X)	IWB(M)	0.81 (0.04)	[0.73, 0.88]	20.72***	
IWB(M)	WRP(Y)	0.37 (0.03)	[0.29, 0.44]	9.5***	
STP(X)	WRP(Y)	0.46 (0.04)	[0.38, 0.55]	10.8***	
Indirect effect					
Predictor	Mediator	Outcome	B(SE)	95% CI	
STP(X)	IWB(M)	WRP(Y)	0.29 (0.0)	[0.20, 0.41]	
Indirect effect (Sobel test)					
Predictor	Mediator	Outcome	B(SE)	<i>Z</i>	<i>p</i>
STP(X)	IWB(M)	WRP(Y)	0.21 (0.08)	2.686	0.007
Moderated mediation model with knowledge collecting as dependent variable					
Predictor	Outcome	B(SE)	95% CI	<i>t</i> value	
STP	IWB	0.12 (0.08)	[0.03, 0.28]	1.53**	
Initiative climate	IWB	0.53 (0.08)	[0.37, 0.69]	6.6**	
STP × initiative climate	IWB	0.04 (0.02)	[0.00, 0.08]	1.8**	
IWB	WRP	0.37 (0.03)	[0.29, 0.44]	9.5**	
Conditional indirect effect of transformational leadership at different values of social support					
Mediator	Initiative climate	Effect	Boot SE	Boot 95% CI	
Employee engagement	4.27	0.07	0.03	[0.01, 0.14]	
	5.10	0.09	0.03	[0.03, 0.15]	
	5.93	0.12	0.04	[0.05, 0.19]	

Table 5. Mediation analysis and moderated mediation analysis of work role performance as dependent variable

Note(s): B = coefficient; SE = standard error; CI = confidence interval; **p* < 0.05; ***p* < 0.01; ****p* < 0.001; bootstrap sample size = 5,000; values for initiative climate are the mean and plus/minus one standard deviation from the mean

discover ways to complete work more efficiently through innovative thinking and execution. Also, mediated total effect as compared to direct effect showcases that the impact of soft TQM on firm performance gets magnified with IWB performance outcomes as mediator. There are many studies focusing on innovation and performance of organization (Damanpour and Evan, 1984; Rosenbusch *et al.*, 2011) and less established at an individual level (Dörner, 2012). Present study bridged the gap by connecting soft TQM practices with individual work performance through IWB.

H3 tested the moderating effect of initiative climate on the mediation by IWB between STP and WRP. Why initiative climate becomes so important in the entire model is because it is this which help in converting an innovative idea in the mind of employee (Raub and Liao, 2012). Initiative climate provides the confidence to the employee to create something new, to think out of the box and execute it in his/her work (Pervin, 1989). The moderation by initiative climate is tested at three levels, i.e. mean -1 S.D., Mean and Mean +1 S.D. effect score of initiative climate was found to be positive and significant at all the three levels but also, it increased with increase in the tested levels. This shows that increase in initiative climate at

workplace fosters impact of STP on IWB and further to WRP. The entire model under study tries to showcase how soft TQM practices support innovative behaviour which leads to better work performance. Here, initiative climate has an important role of moderating the STP to IWB path. Overall, moderated mediation model gave better results than direct or mediated model.

5. Implications

5.1 Theoretical implications

The study has many theoretical implications on ongoing research. First, it extended the soft TQM practices literature by linking it with various organizational as well as individual-level variables. Connecting SQP with innovative behavior and WRP has given boost to SQP studies as past studies have focussed more on hard TQM practices and did little to connect it with individual-level variable. More focus was given to organizational-level variables. Present study will boost further research on SQP and its antecedents and consequences.

Second, employee IWB has been tested as mediator in the present study. Past studies have focussed on IWB's contribution towards organization and seldom focussed on what it does to individual work performance. Also, present study established IWB as catalyst between SQP and WRP. No study till now has tried to bridge the gap. In that sense, the work done is novel in nature.

Third, study tested role of initiative climate as moderator of the relationship between soft TQM and IWB. Also, moderated mediation was also checked. The significant result showcases value of right climate to boost innovative behavior and role performance in employees. The complex relationship between individual and organisational variables requires more focus and the present study will add another milestone in doing it. Researchers can take queues to venture into similar kind of studies in future. The overall model of the study is unique in nature and has never been tested in any context.

5.2 Managerial implication

Past studies have estimated that TQM implementations have more than 60% of failure rate and these turn out to be activities with wastage of resources and disengaged workforce (Beer and Nohria 2000; Mohammad Mosadeghrad, 2014). To avoid this sort of an outcome, special attention needs to be devoted to the employee attitude, behavioural support and preparedness towards the TQM initiatives. This is particularly the reason for considering the role of soft TQM practices in this study. As the findings suggest, when the employees are adequately trained, empowered, involved and organized as team, it would result in employee innovative behaviour and improved work role performance. The top management should be persuaded to be more committed to the above-mentioned activities for more positive employee-level outcomes.

The findings of the current study would help managers to understand the positive association between soft TQM initiatives and innovative behaviour, so that the costs incurred for TQM implementations are justified. Literature that support the negative association between TQM and innovation can be challenged with the help of the study findings. Managers should treat soft TQM practices as necessary infrastructure to support employee initiatives to new ideas and forge inter-organizational relationships and promote pro-activity. This sequence of steps would potentially stimulate innovative behaviour and lead to product and process innovation.

The initiative climate is a crucial factor for providing the indirect influence on the relationship between soft TQM and innovative behaviour. The significant moderating effect reveals that the managers need to encourage employee to take part in self-initiated and future

oriented activities. Employees perceive the need for self-initiation, more often than not, when their managers acknowledge their work demands, provides in-depth communication and offers adequate rewards and recognition programs.

6. Limitations and future research

The present study suffers from some limitations that could be taken care in the future research studies. First, the study didn't incorporate any control variables such as age, gender and educational level, which might have impacted the results. Second, this study has chosen the respondents only from the manufacturing companies of UAE, therefore, the generalization of the results to the other countries and industries should be done with enough caution. Future studies may re-examine the proposed relationships among the study variables in pharmaceutical, banking and other service-based industries. Third, the data collected for the study is self-reported and cross-sectional in nature, which may be susceptible to CMB. Even though, the presence of the bias was ruled out using the Harman's single factor test, future studies may adopt multi source designs or longitudinal designs to validate the proposed relationships. Fourth, the outcome variable, work role performance is treated as a summated scale as per the analysis conducted in this study and in order to bring more insights, future studies may consider conducting a second-order analysis of soft TQM practices and work role performance at respective dimension level. Lastly, future studies may consider testing for the association between soft TQM practices and employee in role and extra role performance, with a mediating effect of employee motivation for value co-creation and moderating effect of trust in management.

7. Conclusion

In this study, the conceptual framework was developed to understand the effects of soft TQM practices on employee work role performance the context of select manufacturing companies across the United Arab Emirates. Additionally, the indirect effects of IWB were tested as a mediator between soft TQM practices and work role performance; and initiative climate was tested as a moderator between soft TQM practices and IWB. The findings revealed that soft TQM practices positively influenced employee work role performance. It can be understood that the manufacturing companies in UAE are providing adequate training and empowerment, involvement in decision making and are organized for teamwork. These factors are contributing to the employees to be more proficient, adaptive and pro-active in their tasks. Soft TQM practices are proved to be imminent for the companies to achieve competitive advantage. The findings also demonstrated that IWBs act as a partial mediator between the soft TQM and work role performance. The top management in an organization is vital for creating a culture of innovation, by empowering the operational-level employees to execute programs and make decisions. As per the role theory, performance at work is based on social norms, internal and external expectations, which are related to social sanctions and rewards. In the absence of these social norms, individual's self-efficacy and initiation make the employee proactive in the role. Lastly, the findings revealed that initiative climate showed a significant moderating effect between soft TQM and IWB. The presence of initiative climate prompts the employees to be more self-initiated and change oriented about the soft TQM practices such as training, teamwork, involvement and empowerment. These aspects would potentially contribute to display innovative behaviour at work.

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