A STUDY ON THE INFLUENCE OF TQM FACTOR ON JOB ENGAGEMENT

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Abstract

The objective of the present study is to determine the total quality management practice of continuous improvement in different telecom sectors. The current study is carried out to test the association between continuous improvement and job engagement. It involves an investigation on a sample of 668 employees of different telecom companies using questionnaire. Structured questionnaire was used to collect the data. All data were analyzed applying appropriate statistical tools by using SPSS 24.0. It is found that continuous improvement is significantly correlated with job engagement (p<0.001).

Keywords: continuous improvement, job engagement

Introduction:

In the last decades, organizations pay more attention to developing and optimizing their strategy and management methods to survive in the present competitive market. The important fundamentals of the competitiveness is "quality" as the outcome of presentation, which has a major function in the accomplishment of organizations (Madanat & Khasawneh, 2017).

Continuous improvement is the key techniques for reaching the highest level of success by adopting long-term effort to recover the value of process, services and product. Continuous improvement refers to both breakthrough improvements and incremental changes which may yield one of the following forms: improving services and products; decreasing defects and related cost, rising productivity and efficacy in the use of organization resources; and improving performance (Lindsay et al., May 2011). Continuous improvement is not only in improving present outcome but also improving the process to develop upcoming results. Thus, constant development of activities, operations and aspects are the fundamentals of TQM for competitive advantage of any organization.

The objectives of the present study were to determine the total quality management practices of continuous improvement in different telecom sectors. The current study is to test the association between continuous improvement and job engagement of the respondents

HYPOTHESIS OF THE STUDY TO BE TESTED NULL HYPOTHESIS

H1: There is no significant relationship between continuous improvement and job engagement

Methodology:

The total sample size considered for the present research study is 668. The research has been done with the employees of different telecommunication sector (BSNL, Idea, Vodafone, Airtel and Reliance Jio). In present study random sampling is adopted to select the respondent because everyone among the employees will have equal opportunity to be selected. The questionnaire consists of two sections which contains personal details and questions measuring the level of job and cognitive engagement. First section includes the personal profile regarding age, gender, education, income etc. and second section contains questions regarding measuring the level of total quality human resource practices (continuous improvement), and employee engagement (job). This study is conducted using five scale Likert scale. Percentage, mean, and standard deviation are commonly used as descriptive statistics. We used SPSS version 24.0 to calculate the Cronbach's alpha (α). Scale with Cronbach's alpha (α) is ranges between 0 (no consistency) to 1 (complete consistency). According to Zikmund, Babin, Carr, and Griffin (2010), the standard coefficient alpha (α) is quantified as below:

α = 0.80 to 0.95 (considered as very good reliability)

α = 0.70 to 0.80 (considered as good reliability)

α = 0.60 to 0.70 (considered as fair reliability)

α = <0.60 (consider as poor reliability)

Cronbach's alpha (α), which is the most commonly used estimate of a multiple-element scale's reliability and it signifies the average of all possible split-half reliabilities for a multiple-item scale. Inferential analysis was applied to test the hypotheses that is proposed in this study through Chi-Square test, Pearson Correlation Coefficient, Multiple Linear Regression. Pearson correlation coefficient is applied to quantify and prove the association between each different independent variable and dependent variable.

RESULTS:

Cronbach's alpha test is applied to check the reliability of questions or items. The **Table 1** display results of continuous improvement. The Cronbach's alpha test is performed and it resulted over 0.7 indicating internal consistency of the selected items for continuous improvement is very good.

Table 1: The Cronbach's Alpha for continuous improvement (internal consistency or **reliability test**).

TQHRM Factors	**Cronbach's Alpha**	**No. of items**
Continuous Improvement	0.875	4

The frequency of continuous improvement is depicted in **Table 2.** On the overall basis, 67.6% of total employees agreed (including strongly agree) to the statement that, "Common types of faults are informed to all the employees", while 56% of employees agreed (including strongly agree) that "the causes of all the possible faults are identified and informed to all the employees". Again, 13% of the employee strongly agreed that "Continuous improvement tools (brainstorming, check sheet and other statistical process control) are applied on regular basis". Around 28.1% of employees strongly agreed to the statement that "Benchmarking has been used to enhance the organization performance".

Table 2: Frequencies of continuous improvement in different telecom industries

	Continuous Improvement			
	Common types of faults are informed to all the employees.	The causes of all the possible faults are identified and informed to all the employees	Continuous improvement tools (brainstorming, check sheet and other statistical process control) are applied on regular basis	Benchmarking has been used to enhance the organization performance.
	Frequency (%)	**Frequency (%)**	**Frequency (%)**	**Frequency (%)**
Strongly disagree	60 (9.0)	69 (10.3)	67 (10.0)	59 (8.8)
Disagree	18 (2.7)	39 (5.8)	73 (10.9)	8 (1.2)
Neither agree, nor disagree	139 (20.8)	186 (27.8)	214 (32.0)	93 (13.9)
Agree	317 (47.5)	260 (38.9)	224 (33.5)	320 (47.9)
Strongly agree	134 (20.1)	114 (17.1)	90 (13.5)	188 (28.1)

Mean of continuous improvement practices in different telecom sectors is shown in **Table 3**. Under continuous improvement, the attribute 'Benchmarking has been used to enhance the organization performance' has the highest mean value of 3.85 and the attribute 'Continuous improvement tools (brainstorming, check sheet and other statistical process control) are applied on regular basis' had the lowest mean 3.29. Overall, the mean of continuous improvement was 3.57. Therefore, the continuous improvement is reasonably good in this study population.

Table 3: Mean of continuous improvement in different telecom sectors

Continuous Improvement	**Mean**	**SD**
Common types of faults are informed to all the employees.	3.67	1.103
The causes of all the possible faults are identified and informed to all the employees	3.47	1.153
Continuous improvement tools (brainstorming, check sheet and other statistical process control) are applied on regular basis	3.29	1.140
Benchmarking has been used to enhance the organization performance.	3.85	1.115
Total Mean	**3.57**	**1.128**

Table 5: Mean of Job engagement in different telecom industry

	I really "throw" myself into my job		Sometimes I am so into my job that I lose track of time		This job is all consuming; I am totally into it		My mind often wanders and I think of other things when doing my job®		I am highly engaged in this job	
	Mean	**SD**	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**
Airtel	3.7	1.08	3.69	1.109	3.83	1.051	2.29	1.078	3.7	1.004
Reliance	3.67	1.123	3.7	1.235	3.74	1.093	2.79	1.392	3.63	1.134
Vodafone	3.73	1.057	3.75	1.183	3.89	1.058	3.03	1.377	3.66	1.084
IDEA	3.45	1.245	3.37	1.278	3.58	1.252	2.04	0.975	3.48	1.157
BSNL	3.62	1.325	3.41	1.455	3.65	1.334	2.17	1.1	3.6	1.251
	3.65	1.138	3.63	1.222	3.76	1.126	2.51	1.264	3.63	1.1

Table 5 depicted the mean of job engagement in different telecom industry. Mean of cognitive engagement under the attribute 'I really "throw" myself into my job in Airtel, Reliance, Vodafone, Idea, and BSNL were 3.7, 3.67, 3.73, 3.73, 3.45 and 3.62 respectively. Among the companies in BSNL had highest mean under this attribute. Mean of job engagement (under the attribute 'Sometimes I am so into my job that I lose track of time') in Airtel, Reliance, Vodafone, Idea, and BSNL were 3.69, 3.7, 3.75, 3.37 and 3.41 respectively. Vodafone had highest mean under the attribute 'Sometimes I am so into my job that I lose track of time'. Mean of job engagement (under the attribute 'This job is all consuming; I am totally into it') in Airtel, Reliance, Vodafone, Idea, and BSNL were 3.83, 3.74, 3.89, 3.58 and 3.65 respectively. Under job engagement, the attribute 'My mind often wanders and I think of other things when doing my job' in Airtel, Reliance, Vodafone, Idea, and BSNL were 2.29, 2.79, 3.03, 2.04 and 2.17 respectively. Under job engagement, the attribute 'I am highly engaged in this job' in Airtel, Reliance, Vodafone, Idea, and BSNL were 3.7, 3.63, 3.66, 3.48 and 3.6 respectively. Therefore, the job engagement is reasonably good in this study population.

Table 7: Correlation between the continuous improvement and job engagement

	Job engagement				
Continuous Improvement	I really "throw" myself into my job	Sometimes I am so into my job that I lose track of time	This job is all consuming; I am totally into it	My mind often wanders and I think of other things when doing my job®	I am highly engaged in this job
Common types of faults are informed to all the employees.	0.417**	0.393**	0.561**	**0.087***	0.469**
The causes of all the possible faults are identified and informed to all the	**0.621****	0.588**	0.606**	0.183**	0.566**

employees					
Continuous improvement tools (brainstorming, check sheet and other statistical process control) are applied on regular basis	0.392**	0.396**	0.479**	0.152**	0.460**
Benchmarking has been used to enhance the organization performance.	0.494**	0.477**	0.498**	0.152**	0.552**
** Correlation is significant at the 0.01 level (2-tailed). * Correlation is significant at the 0.05 level (2-tailed).					

The various continuous improvement factors are observed to be significantly correlated with the job engagement indicating that with the increase of the continuous improvement, the job engagement of the employees increased. The highest correlation was observed between the "The causes of all the possible faults are identified and informed to all the employees" of job engagement and the "the causes of all the possible faults are identified and informed to all the employees" of continuous improvement (r=0.621). Whereas, "Common types of faults are informed to all the employees" of continuous improvement and "My mind often wanders and I think of other things when doing my job" of job engagement had lowest correlation (r=0.087).

Table 8 Regression analysis to test the relation between the job engagement and continuous improvement

Model Summary					**ANOVA**		**Status**
Model	R	**R Square**	Adjusted R Square	Std. Error of the Estimate	F	*P*-value	
1	0.654	0.427	0.424	0.855	123.70	**<0.001**	**Significant (Null hypothesis rejected)**

From **Table 8** it was identified that there is significant relationship between Continuous improvement and job engagement. That mean null hypothesis was rejected. According to the table above, the *p*-value is **<0.001**, therefore, the value of F-statistic is significant **at** 134.229. As a result, the proposed model for this study is a good descriptor of the relation between the predictor variables and dependent variable.

Table 9: Regression coefficients between the job engagement and continuous improvement practices

Coefficients					
	Unstandardized Coefficients		Standardized Coefficients		
Model	B	Std. Error	Beta	t	Sig.
(Constant)	1.166	0.129		9.059	<0.001
Common types of faults are informed to all the employees.	0.265	0.047	0.260	5.616	<0.001
The causes of all the possible faults are identified and informed to all the employees	0.390	0.041	0.399	9.625	<0.001
Continuous improvement tools (brainstorming, check sheet and other statistical process control) are applied on regular basis	0.070	0.042	.071	1.691	0.091
Benchmarking has been used to enhance the organization performance.	0.011	0.046	.011	0.243	0.808
Dependent Variable: Job engagement					

From the **Table 9**, it is identified that the independent variables of continuous improvement had significantly impact on job engagement at various telecom sectors in Chennai, India. It was found that continuous improvement practices like "the causes of all the possible faults are identified and informed to all the employees" (β=0.399; $p<0.001$) is the strongest factor for job engagement followed by "common types of faults are informed to all the employees" (β=**0.260**; $p<0.001$). However, practices such as "application of continuous improvement tools on regular basis" and "benchmarking to enhance the organization performance" does not showed significant impact in this model.

Discussion:

Strong competition among different companies has led to the cut down of tariff rate. However, the major areas of concern for the telecom sectors are the increase in attrition rate that is at present around the 25%. It is well establish that job engagement is the key motivation to stick on to the job of the employees.

Continuous improvement practices is found to be significantly correlated with the job engagements (p<0.001). Which indicates that with the increase of the continuous improvement , the job engagement of the employees increased. From the present study it is interpreted that there is significant relationship between continuous improvement and job engagement. The present proposed model is thus a good descriptor of the relation between the Continuous improvement and job engagement

Conclusion

The application of TQM concepts in HR practices contributes to enhance the employee engagement levels. The study suggests inculcating the concept of continuous improvement into HR practices that has given a new approach to the traditional HR practices. This approach can be further considered to apply other TQM concepts like benchmarking, Just in time approach for the future research

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