

Comparative Study of Top Management Involvement and Team Building among Quality Award and Non-Quality Award Winning Manufacturing Industries in Karnataka State in India

Ravi Kumar R¹, Subrahmanya Bhat², Gururaj Upadyaya³, Satyabodh M Raichur⁴

¹Research Scholar, Mechanical Engineering, NMAMIT, NITTE, Udupi, Karnataka India. ^{2,3}

Professor, Mechanical Engineering, NMAMIT, NITTE, Udupi, Karnataka, India, ⁴Professor, Mechanical Engineering, APS College of Engineering, Bangalore, Karnataka ¹Corresponding

Author: ravi.kr727@gmail.com

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Abstract

This work talks about comparative study of Employee involvement parameters such as top management and team building in quality award and non-quality award winning manufacturing organisation in Karnataka state in India. Parameters such as Top management involvement and team building are examined with statistically. The purpose is to identify differences in the manufacturing industries who have won quality awards such as Deming, CII-Exim and Ramakrishna Bajaj Awards about top management involvement and team building to give suggestions to non-quality award winning organisation. For this survey has been extensively carried out to get response from employees across various manufacturing industries in Karnataka. Primary survey was carried out and received response from 736 out of which 650 of non quality award winning and 86 of quality award winning organisation from various industry in Karnataka a state in India.

Keywords: Team Building, Top management involvement, Quality management, employee involvement

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1. INTRODUCTION:

Today's business environment is very competitive, which has challenged business thinkers to be creative in examining new strategies for survival, growth, competitiveness, and profitability. The reality is that businesses must "shape up" or "ship out" in today's markets where stakeholders

continuously demand more value and competitors provide increasing challenges. Modern business problems demand modern business solutions, thus managers have addressed innovation from many different perspectives, including product, production, procedures, and interactions. Being the department closest to the company's consumers and competitors, marketing has been given the difficult duty of creatively managing innovation projects and innovation itself in the current era of fierce global rivalry, knowledgeable and demanding customers, and activist shareholders. Thus, marketing professionals have looked for fresh and distinctive ways to benefit stakeholders and provide their company a competitive edge. Every marketing decision or activity is driven by the primary motivation to increase marketing performance since the firm's marketing performance, which is essential to the corporate health of the business venture, also impacts the firm's ability to stay in business.

Although having access to the latest manufacturing technologies, equipment, and resources is crucial, the success of a plant ultimately depends on the employees who use those tools. Employees must feel engaged and motivated in their jobs in order to resist the urge to look for work elsewhere.

Continual training and career growth opportunities are a crucial part of keeping employees engaged. Instead than going through the hiring process to find an external applicant when a new position is needed, train and support current employees so they may advance into roles.

The employee will value the chance for advancement and growth, and you won't have to deal with the hassles of the recruitment and on boarding process. Instead of doing annual reviews, have regular discussions with your staff and solicit their opinions on new initiatives.

Effective executive involvement can considerably increase project success since top management support is one of the key success criteria in project management. However, companies are not given a clear list of efficient top management support techniques to attain this type of support in the literature. Thus, the focus of this research is on the top management support mechanisms that are crucial to project success.

Many professionals today are goal oriented. Establish realistic goals together as a team and work towards achieving them. Talk about these goals and review them on a regular basis. In manufacturing, specifically in regulated industries, a lot can change in a very small amount of time. It is a good idea to constantly create goals, both for the short term and the long term. Talk to

employees about what they aspire to and provide them with the resources they need to achieve these goals.

2. Literature Review

This Study is carried to understand how Employee Involvement parameter such as top management and team leadership effects on TQM practices. Parameters that affect top management are found to be Achieving vision & mission towards Quality Award, Board level decision involvement, Provide complete control over work, Quality circle participation, Job enlargement and enrichment, Concurrent engineering decisions, Response to changes and take immediate action, Financial participations, Quality improvement teams are active, Critical quality issues are identified collectively and parameter such as team leadership is defined by Clear understand of roles of fellow members, Mission are well aligned with goals, Value all members, Avoid duplication, Effective listeners, Communication is honest, Cooperation and mutual support, Work without any differences, Trusting and supportive relationship with other team, Communication is effective cross functionally, Collaboration are productive, Integrate our plan with other group.

3. Objective of the Present work:

This paper concentrate on comparative study of employee involvement in Quality award and non Quality Award firms in manufacturing industries for parameters such as top management and team leadership. The performance of the firms are tested statistically.

4. General Information of the participant companies

The information provided by the participant companies and the survey results are discussed below. It begins with the general descriptive statistics of respondents. It consists of the response rate, percentage of responses, types of industry involved and the status of employee involvement. The survey covered 736 companies. A total of 650 responses were received from non-quality award winning and 86 from quality award winning firms in Karnataka. Breakdown of the respondents regarding their size and type of industry is shown in Table`. A small proportion 18% of the organization was categorized as large industries with more than 500 employees, and another 39% of the organization were medium sized industries employing between 100 to 500 employees, while the small industries, those having less than 100 employees, represented 26% of the total respondents from Non Quality Award winning firms. Breakdown of the respondents of non quality award winning firms regarding their size and type of industry is shown in Table 1. About 56% of the organization was categorized as large industries with more than 500 employees, and another 44% of

the organization were medium sized industries employing between 100 to 500 employees from Quality Award winning firms.

Table 1 Responses received by size of the company

Type / Size	Number of Responses	Percentage (%)	Number of Responses	Percentage (%)
Size of the Company				
(a) > 1000 employees (Large)	121	18	48	56
(b) between 500 & 1000 Employees (Medium)	257	39	38	44
(c) <500 employees (Small)	171	26		
(d) Undisclosed	101	15		
Total	650	100	86	100

5. Results and Discussion

Normality Test: A normality test assesses whether a sample of data is representative of a population that has a normal distribution. It is typically carried out to see if the research's data have a normal distribution. The Kolmogorov-Smirnov Test for Normality was carried and the data was found normal distribution curve.

Factor test: Factor analysis was conducted to condense or summarize the information on reasons for Employee Involvement into a smaller set of new composite dimensions (factors) with a minimum loss of information.

Table2: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.486
Approx. Chi-Square	1397.675
Bartlett's Test of Sphericity	
df	1225

Sig.

.000

Reliability Test:

The Factors decided were then subjected to reliability analysis, which is the requirement for such type of data analyses. Internal consistency method was used to conduct reliability analysis. Internal consistency can be established using a reliability coefficient such as Cronbach's alpha. Alpha is the average of the correlation coefficient of each item with each other item. Table

Table 3

Factor name	Cronbach alpha
Top Management	0.882
Team Leadership	0.827

Hypothesis test:

Hypothesis are formulated for each and every questions for both quality award and non quality award firms .

Table:4 Null Hypothesis for Quality Award Firm.

H ₀ (1.0W)	Top Management involvement does not exist in the respondent firms
H ₀ (1.1-W)	The employees of the company are not aware of vision & mission statement of my firm
H ₀ (1.2-W)	Participative Management does not exist in the firms
H ₀ (1.2.1-W)	Firm does not involve employees for participation at the board level for major decisions.
H ₀ (1.2.2-W)	Firm does not provide employees control over the work
H ₀ (1.2.3-W)	Firm does not encourage employees by allowing participation through quality circles.
H ₀ (1.2.4-W)	Firm does not encourage employees by Participation through job enlargement and enrichment.

H ₀ (1.3-W)	Continuous Improvement doesn't exist in the firms
H ₀ (1.3.1-W)	Firm does not involve in concurrent engineering decision making
H ₀ (1.3.2-W)	Firm does not respond to changes and take immediate action
H ₀ (1.3.3-W)	Firm does not encourage employees by Financial participation.
H ₀ (1.3.4-W)	Quality improvement teams are not widely used and are not active in all departments
H ₀ (1.3.5-W)	Firm doesn't identify quality issues collectively
H ₀ (2-W)	Team leadership doesn't exist in the respondent firms
H ₀ (2.1-W)	Common goals doesn't exist in the firms
H ₀ (2.1.1-W)	In the firm roles and responsibilities of members are not aware to fellow members
H ₀ (2.1.2-W)	Firm mission are not aligned with goals of organisation
H ₀ (2.1.3-W)	Firm doesn't value all members
H ₀ (2.1.4-W)	The firm duplicates the work
H ₀ (2.2-W)	Team leadership doesn't exist in the firms
H ₀ (2.2.1-W)	Firm disagrees that the team members are effective listeners
H ₀ (2.2.2-W)	The firm disagrees if the team members communicate honestly.
H ₀ (2.2.3-W)	The firm disagrees the team members cooperate with each other and support simultaneously.
H ₀ (2.2.4-W)	The firm disagrees the team members are unanimous that is work without any difference between the employers
H ₀ (2.3-W)	Cross functional participation doesn't exist in respondent firms
H ₀ (2.3.1-W)	Firm disagrees that their team upholds the other team members trust and support
H ₀ (2.3.2-W)	Firm denies the proper communication with other teams
H ₀ (2.3.3-W)	Firm does not ensure collaboration of team members with other teams are productive
H ₀ (2.3.4-W)	Firm disagrees that their teams combine with other team to integrate establish ideas

We now state hypothesis for non quality award firms

Table 5: Null Hypothesis for Non-Quality award winning firms

H ₀ (1.0NW)	Top Management involvement does not exist in the respondent firms
H ₀ (1.1-NW)	The employees of the company are not aware of vision & mission statement of my firm
H ₀ (1.2-NW)	Participative Management does not exist in the firms
H ₀ (1.2.1-NW)	Firm does not involve employees for participation at the board level for major decisions.
H ₀ (1.2.2-NW)	Firm does not provide employees control over the work
H ₀ (1.2.3-NW)	Firm does not encourage employees by allowing participation through quality circles.
H ₀ (1.2.4-NW)	Firm does not encourage employees by Participation through job enlargement and enrichment.
H ₀ (1.3-NW)	Continuous Improvement does not exist in the firms
H ₀ (1.3.1-NW)	Firm does not involve in concurrent engineering decision making
H ₀ (1.3.2-NW)	Firm does not respond to changes and take immediate action
H ₀ (1.3.3-NW)	Firm does not encourage employees by Financial participation.
H ₀ (1.3.4-NW)	Quality improvement teams are not widely used and are not active in all departments
H ₀ (1.3.5-NW)	Firm does not identify quality issues collectively
H ₀ (2-NW)	Team leadership does not exist in the respondent firms
H ₀ (2.1-NW)	Common goals does not exist in the firms
H ₀ (2.1.1-NW)	In the firm roles and responsibilities of members are not aware to fellow members
H ₀ (2.1.2-NW)	Firm mission are not aligned with goals of organisation
H ₀ (2.1.3-NW)	Firm does not value all members
H ₀ (2.1.4-NW)	The firm duplicates the work
H ₀ (2.2-NW)	Team leadership does not exist in the firms
H ₀ (2.2.1-NW)	Firm disagree that the team members are effective listeners
H ₀ (2.2.2-NW)	The firm disagree if the team members communicate honestly.
H ₀ (2.2.3-NW)	The firm disagree the team members cooperate with each other and support simultaneously.
H ₀ (2.2.4-NW)	The firm disagree the team members are unanimous that is work without any difference between the employers
H ₀ (2.3-NW)	Cross functional participation does not exist in respondent firms
H ₀ (2.3.1-NW)	Firm disagree that there team upholds the other team members trust and support
H ₀ (2.3.2-NW)	Firm denies the proper communication with other teams
H ₀ (2.3.3-NW)	Firm does not ensure collaboration of team members with other teams are productive

H ₀ (2.3.4-NW)	Firm disagree that their teams combines with other team to integrate establish ideas
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Above tables we have stated hypothesis for conducting independent sample test and have carried test for all the variables . We have also carried F Test to identification of significance difference between the firms. To accept null hypothesis significance value from T test should be less than or equal to 0.05. Similarly to accept significance of the results through F test we will be doing further F test and if Significance is less than or equal to 0.05 then we accept null hypothesis.

Table 6 :Results of the test

Sub Parameters	Parameters	F	Sig.	T	Sig. (2-tailed)	Type of Company	Type of Hypothesis Accepted	Results of Significance
	Achieving vision & mission towards Quality Award	20.93	0	1.22	0.06	Non-Quality	H0(1.1-NW) Null Hypothesis Accepted	H1(1.1-SD) There is a significant difference between employees of Quality Award winning firms and firms that have not won Quality Awards in terms of awareness of vision & mission statement
				7.81	0	Quality	H1(1.1-W) Alternative Hypothesis Accepted	

Participative management	Board level decision involvement					Non-Quality		H1(1.2.1-SD) There is a significant difference between employees of Quality Award winning firms and firms that have not won Quality Awards in terms of Board level decision involvement
		107.34	0	0.92	0.09		H0(1.2.1-NW) Null Hypothesis Accepted	
						Quality	H1(1.2.1-W) Alternative Hypothesis Accepted	
				9.47	0			
	Provide complete control over work					Non-Quality		H1(1.2.2-SD) There is a significant difference between employees of Quality Award winning firms and firms that have not won Quality Awards in terms of Provide complete control over work
		18.31	0	1.83	0.07		H0(1.2.2-NW) Null Hypothesis Accepted	
				2.62	0.01	Quality	H1(1.2.2-W) Alternative	

							Hypothesis Accepted	
	Quality circle participation	16.25	0	1.46	0.09	Non-Quality	H0(1.2.3-NW) Null Hypothesis Accepted	H1(1.2.3-SD) There is a significant difference between employees of Quality Award winning firms and firms that have not won Quality Awards in terms of Quality circle participation
				9.05	0	Quality	H1(1.2.3-W) Alternative Hypothesis Accepted	
	Job enlargement and enrichment	7.68	0.01	7.11	0.06	Non-Quality	H0(1.2.4-NW) Null Hypothesis Accepted	H1(1.2.4-SD) There is a significant difference between employees of Quality Award winning firms and firms that have not won Quality Awards in terms of Job enlargement and enrichment
				8.44	0	Quality	H1(1.2.4-W) Alternative Hypothesis Accepted	
Kaizen	Concurrent engineering decisions	10.28	0	1.76	0.06	Non-Quality	H0(1.3.1-NW) Null Hypothesis Accepted	H1(1.3.1-SD) There is a significant difference

						Quality		between employees of Quality Award winning firms and firms that have not won Quality Awards in terms of Concurrent engineering decisions
			5.86	0			H1(1.3.1-W) Alternative Hypothesis Accepted	
	Response to changes and take immediate action					Non-Quality		H1(1.3.2-SD) There is a significant difference between employees of Quality Award winning firms and firms that have not won Quality Awards in terms of Response to changes and take immediate action
		7.92	0	2.62	0.09		H0(1.3.2-NW) Null Hypothesis Accepted	
				2.99	0.04	Quality	H1(1.3.2-W) Alternative Hypothesis Accepted	
	Financial participations					Non-Quality	H0(1.3.3-NW) Null Hypothesis Accepted	H1(1.3.3-SD) There is a significant difference between employees of Quality Award winning firms and firms that have not won Quality Awards in terms of Financial
		55.78	0	1.05	0.08			
				1.8	0.01	Quality	H1(1.3.3-W) Alternative Hypothesis Accepted	

								participations
	Quality improvement teams are active					Non-Quality		H1(1.3.4-SD) There is a significant difference between employees of Quality Award winning firms and firms that have not won Quality Awards in terms of Quality improvement teams are active
		3.23	0.03	1.09	0.12		H0(1.3.4-NW) Null Hypothesis Accepted	
				6.94	0	Quality	H1(1.3.4-W) Alternative Hypothesis Accepted	

	Critical quality issues are identified collectively	8.78	0	1.42	0.17	Non-Quality	H0(1.3.5-NW) Null Hypothesis Accepted	H1(1.3.5-SD) There is a significant difference between employees of Quality Award winning firms and firms that have not won Quality Awards in terms of Critical quality issues are identified collectively
				4.92	0	Quality	H1(1.3.5-W) Alternative Hypothesis Accepted	
Common goals	Clear understand of roles of fellow members	3.49	0	1.49	0.16	Non-Quality	H0(2.1.1-NW) Null Hypothesis Accepted	H1(2.1.1-SD) There is a significant difference between employees of Quality Award winning firms and firms that have not won Quality Awards in terms of Clear understand of roles of fellow members
				1.63	0.05	Quality	H1(2.1.1-W) Alternative Hypothesis	

						Accepted	
	Mission is well aligned with goals					Non-Quality	H1(2.1.2-SD) There is a significant difference between employees of Quality Award winning firms and firms that have not won Quality Awards in terms of Mission are well aligned with goals
		10.29	0	1.61	0.06	H0(2.1.2-NW) Null Hypothesis Accepted	
				7.81	0	Quality	
						H1(2.1.2-W) Alternative Hypothesis Accepted	
	Value all members					Non-Quality	H1(2.1.3-SD) There is a significant difference between employees of Quality Award winning firms and firms that have not won Quality Awards in terms of Value all members
		5.55	0.02	1.86	0.06	H0(2.1.3-NW) Null Hypothesis Accepted	
				2.16	0.03	Quality	
						H1(2.1.3-W) Alternative Hypothesis Accepted	

	Avoid duplication	5.75	0.02	1.86	0.06	Non-Quality	H0(2.1.4-NW) Null Hypothesis Accepted	H1(2.1.4-SD) There is a significant difference between employees of Quality Award winning firms and firms that have not won Quality Awards in terms of Avoid Duplication
						Quality	H1(2.1.4-W) Alternative Hypothesis Accepted	
				4.45	0			
Team leadership	Effective listeners	7.58	0	1.08	0.09	Non-Quality	H0(2.2.1-NW) Null Hypothesis Accepted	H1(2.2.1-SD) There is a significant difference between employees of Quality Award winning firms and firms that have not won Quality Awards in terms of Effective listeners
				7.21	0.04	Quality	H1(2.2.1-W) Alternative Hypothesis Accepted	

	Communication is honest	35.75	0	1.75	0.08	Non-Quality	H0(2.2.2-NW) Null Hypothesis Accepted	H1(2.2.2-SD) There is a significant difference between employees of Quality Award winning firms and firms that have not won Quality Awards in terms of Communication is honest
				2.42	0.01	Quality	H1(2.2.2-W) Alternative Hypothesis Accepted	
	Cooperation and mutual support	9.15	0.003	1.62	0.07	Non-Quality	H0(2.2.3-NW) Null Hypothesis Accepted	H1(2.2.3-SD) There is a significant difference between employees of Quality Award winning firms and firms that have not won Quality Awards in terms of Cooperation and mutual support

				12.57	0	Quality	H1(2.2.3-W) Alternative Hypothesis Accepted	
	Work without any differences	10.34	0.03	1.3	0.07	Non-Quality	H0(2.2.4-NW) Null Hypothesis Accepted	H1(2.2.4-SD) There is a significant difference between employees of Quality Award winning firms and firms that have not won Quality Awards in terms of Work without any differences
				7.98	0.02	Quality	H1(2.2.4-W) Alternative Hypothesis Accepted	

Cross-functional teams	Trusting and supportive relationship with another team	11.08	0	1.22	0.06	Non-Quality		H1(2.3.1-SD) There is a significant difference between employees of Quality Award winning firms and firms that have not won Quality Awards in terms of Trusting and supportive relationship with other team
				3.26	0.01	Quality	H0(2.3.1-NW) Null Hypothesis Accepted	
							H1(2.3.1-W) Alternative Hypothesis Accepted	

	Communication is effective cross functionally	38.1	0			Non-Quality		H1(2.3.2-SD) There is a significant difference between employees of Quality Award winning firms and firms that have not won Quality Awards in terms of Communication is effective cross functionally
				1.86	0.06		H0(2.3.2-NW) Null Hypothesis Accepted	
						Quality		H1(2.3.2-W) Alternative Hypothesis Accepted
	Collaboration is productive	4.24	0.03	1.67	0.06	Non-Quality		H1(2.3.3-SD) There is a significant difference between employees of Quality Award winning firms and firms that have not won Quality Awards in terms of Collaboration are productive
							H0(2.3.3-NW) Null Hypothesis Accepted	

				11.54	0	Quality	H1(2.3.3-W) Alternative Hypothesis Accepted	
	Integrate our plan with another grp	23.08	0.02	1.39	0.09	Non-Quality	H0(2.3.4-NW) Null Hypothesis Accepted	H1(2.3.4-SD) There is a significant difference between employees of Quality Award winning firms and firms that have not won Quality Awards in terms of Integrate our plan with other group
				5.82	0	Quality	H1(2.3.4-W) Alternative Hypothesis Accepted	

6. Conclusions:

From the above table we can conclude that for Top management Involvement variables such as Achieving vision & mission towards Quality Award, Board level decision involvement, Provide complete control over work, Quality circle participation, Job enlargement and enrichment, Concurrent engineering decisions, Response to changes and take immediate action, Financial participations, Quality improvement teams are active, Critical quality issues are identified

collectively accepts Null Hypothesis in Non Quality award winning firms that indicated there is no Top management involvement in the firms with respect to Employee Involvement.

From the above table we can conclude that for Team Leadership parameters variables such as Clear understand of roles of fellow members, Mission are well aligned with goals, Value all members, Avoid duplication, Effective listeners, Communication is honest, Cooperation and mutual support, Work without any differences, Trusting and supportive relationship with other team, Communication is effective cross functionally, Collaboration are productive, Integrate our plan with other group, accepts Null Hypothesis in Non Quality award winning firms that indicated there is no Team leadership involvement in the firms with respect to Employee Involvement.

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To conclude and justify the results F test was carried and the results from the F test signifies for Top management Involvement variables such as Achieving vision & mission towards Quality Award, Board level decision involvement, Provide complete control over work, Quality circle participation, Job enlargement and enrichment, Concurrent engineering decisions, Response to changes and take immediate action, Financial participations, Quality improvement teams are active, Critical quality issues are identified collectively accepts null Hypothesis Signifying that there is Difference between Quality Award winning Firm and Non Quality Award Winning Firm.

To conclude and justify the results F test was carried and the results from the F test signifies for Team Leadership parameters variables such as Clear understand of roles of fellow members, Mission are well aligned with goals, Value all members, Avoid duplication, Effective listeners, Communication is honest, Cooperation and mutual support, Work without any differences, Trusting and supportive relationship with other team, Communication is effective cross functionally, Collaboration are productive, Integrate our plan with other group, accepts null Hypothesis Signifying that there is Difference between Quality Award winning Firm and Non Quality Award Winning Firm.

Here by Author suggest Firms to improve Employee Involvement he need to look into parameters of Top management and Team Leadership.

7. Limitations of the research

The present research though has attempted to meet all the present objectives, at the end of the research some limitations have been noticed. Though these limitations do not belittle the value of the research they are indicated here to list the possible shortcomings imposed mainly by the circumstantial factors.

- 1) The Research is restricted to demography of Karnataka, based on few literatures Employee factors changes accordingly.
- 2) While doing the survey on effect of TQM practices on business performance, the age of the organization has not been considered and also no sectorial classification of the industries has been done.

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