

An Examination of Total Quality Management Practices in MIDC Area Nagpur

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Abstract

This study sets out to examine the factors affecting the Production and Quality performance in Indian manufacturing Job companies at MIDC Area Nagpur. The study focused on the following objectives: Worker Attitude, Job Satisfaction, Management and Employee Relations, Workload & Work Pressure level, Performance Risk as factors affecting the Production and Quality performance in Indian manufacturing companies at MIDC Area Nagpur. Research methodology: A descriptive survey was adapted to target all company employees who were working in Production and Quality performance department in Indian manufacturing companies at MIDC Area Nagpur.

The research sample size consisted of 100 Indian manufacturing companies at MIDC Area Nagpur. The sampling technique used was snowballing sampling technique which involved 500 participants. Questionnaires were the main tool for data collection. A pilot study was conducted using 50 manufacturing companies at MIDC Area Nagpur. It enabled the researcher to improve on reliability of the instrument used and familiarize researcher with data collection process. Data obtained was both quantitative and qualitative. Quantitative data was coded and keyed into an SPSS package for statistical analysis. Qualitative data was put under themes consistent with research objectives. The results for data analysis were presented in form of frequency tables, charts and graphs. Findings: The study revealed that the main perceived benefits of manufacturing companies at MIDC Area Nagpur: time saving, cost saving and convenience.

Keywords: Worker attitude, Job satisfaction, Management, Employee relations.

Introduction

A worker is a person who has a strong influence toward employees in the first place, and we can describe workers as people that have strong and close interaction with employees in the organization, and it is crucial to have relied on and helpful co-workers as mentioned. The relationship between employees and their co-workers will create trust and compassion between each other and this will encourage them to understand more about their co-worker emotional and psychological since trust among co-worker. Job satisfaction can be considered a psychological factor and it is considered a kind of emotional adjustment to the job and the conditions of employment. That is, if the job in question gives the person pleasure, then the person is satisfied with the job.

Conversely, if the desired job does not provide the desired satisfaction and enjoyment tomorrow, then the person begins to blame the job and seeks to change it. Research shows that employees with higher levels of job satisfaction are physically and mentally fit, but those who are dissatisfied with their job are often disappointed and pessimistic. Job satisfaction is one of the most important variables in the field of organizational behaviour because each organization has specific goals that constitute the existential philosophy of that organization Top management should create and maintain an internal environment in which all employees become fully involved in achieving the institution's objectives. Top management should commit and encourage all employed by the institution to meet customer requirements through continuous improvement.

Research Objectives

The following are the main objectives frame for the research work

1. To study and understand the TQM practices implementation by the manufacturing companies in MIDC Area Nagpur.
2. To examine the affecting factors to the TQM in the manufacturing companies in MIDC Area Nagpur.
3. Evaluation off Organization Relation and Employee Satisfaction in manufacturing companies at MIDC Area Nagpur.

Literature Review

A literature review is a body of text that aims to review the critical points of current knowledge and or methodological approaches on particular topics. Literature reviews are secondary sources. The following literature review has been studied for this research work. **Harrington (1996)**, This research paper is discussed on many of our quality improvement tools without really understanding their impact on the performance of the organization. Challenges some of

the basic principles on which total quality management were founded. **Darren McCabe & Adrian Wilkinson (1997)**, This research paper is discussed on the vision of TQM promises unity, team working, autonomy and empowerment. This article explores how this vision was contradicted by organisational restructuring and the hierarchical imposition of redundancies and contingent employment insecurity in a medium sized bank. **Amrik S. Sohal & Daniel I. Prajogo (2003)**, This research paper is discussed on the relationship between Total Quality Management (TQM) and innovation performance and compares the nature of this relationship against quality performance. The empirical data were obtained from a survey of 194 managers in Australian industry encompassing both manufacturing and non-manufacturing sectors. **Courtney & Yonkong (2017)**, This research paper is discussed on the Job satisfaction is an employee's mental perspective that includes the way that they feel about their job and the employers' organization. In addition, job satisfaction is an enjoyable motivational state that results from achieving job values. **Hee et al., (2019)**, This research paper is discussed on the Job satisfaction can be used as part of evaluations that lead to planning for organizational improvement by presenting results from past strategies and future projections of employees. Pleased and motivated employees will guarantee the organization's long-term success and it is believed that job satisfaction by all employees in any organization is directly related to their level of motivation

Research Methods

In carrying out analysis daily data collected from 2018 to 2020 are used.

Types: Empirical

Research Instrument: Personal Interview.

Research Design: Descriptive

Data Type: Primary & Secondary data

Contact Method: Company Records Survey, By Phone, Personal Meeting.

Sample size: 500

Sampling Technique: Snowballing Sampling Technique

Analysis Tools: Likert Rating Scale 1-5

Data Analysis and Results

Parameters for the Analysis:

A = Company's Objectives and Requirement

B = Guideline for planning of Quality Production

C = Technical Education and Training

D = Decision making process

E = Reducing wastage and defect rates

F = Reward to the employees for his work

G = Delegate's authority with responsibility to employees

H= Quality of raw material

Options No.	Options type Rating	Score level	Assigned Score
1	Always / Strongly Agree / Outstanding	above 80% achievement	Score of 1 means = 1
2	Agree / Often / Very good	60% - 80% achievement	Score of 2 means = 0.80
3	Neutral / Occasionally/Good	50% - 60% achievement	Score of 3 means = 0.60
4	Rarely / Disagree / Below average	40% - 50% achievement	Score of 4 means = 0.50
5	Never / Strongly Disagree / Poor	below 40% achievement	Score of 5 means = 0.40

Table1.1 Obtained Average Score against 5 Point Scale

Management and Employee Relations Responses									
Resp / Ver	A	B	C	D	E	F	G	H	Total
TOTAL	166	161	167	172	183	161	148	177	1335
AVG	1.66	1.61	1.67	1.72	1.83	1.61	1.48	1.77	1.67

Worker Attitude Responses									
Resp / Ver	A	B	C	D	E	F	G	H	Total
TOTAL	180	178	163	170	145	181	167	161	1345
AVG	1.80	1.78	1.63	1.70	1.45	1.81	1.67	1.61	1.68

Job Satisfaction Responses

Resp / Ver	A	B	C	D	E	F	G	H	Total
TOTAL	165	175	171	154	181	168	157	150	1321
AVG	1.65	1.75	1.71	1.54	1.81	1.68	1.57	1.50	1.65

Work Load and Work Pressure Level Responses									
Resp / Ver	A	B	C	D	E	F	G	H	Total
TOTAL	167	163	166	171	185	163	150	179	1344
AVG	1.67	1.63	1.66	1.71	1.85	1.63	1.50	1.79	1.68
Performance Risk Responses									
Resp / Ver	A	B	C	D	E	F	G	H	Total
TOTAL	175	171	171	185	172	183	163	170	1390
AVG	1.75	1.71	1.71	1.85	1.72	1.83	1.63	1.70	1.74

SAMPLE	Management & Employee Relations		Worker Attitude		Job Satisfaction		Work load & Work Pressure level		Performance Risk		Weightage
SAMPLE NO 01 TO 100	A	166	A	180	A	165	A	167	A	175	853
	B	161	B	178	B	175	B	163	B	171	848
	C	167	C	163	C	171	C	166	C	171	838
	D	172	D	170	D	154	D	171	D	185	852
	E	183	E	145	E	181	E	185	E	172	866
	F	161	F	181	F	168	F	163	F	183	856
	G	148	G	167	G	157	G	150	G	163	785
	H	177	H	161	H	150	H	179	H	170	837
SUM	1335		1345		1321		1344		1390		6735
Mean Value	166.875		168.125		165.125		168		173.75		841.875
SD Value	10.36		11.35		10.07		9.99		6.73		48.5

Variables	A	B	C	D	E	F	G	H	Total
Weightage	853	848	838	852	866	856	785	837	6735

Resp. Avg. (500)	1.706	1.696	1.676	1.704	1.732	1.712	1.57	1.674	1.684
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Table 1.2 Results of all Production and Quality performance Improvements in following TQM affecting factors:

	Management and Employee Relations	Worker Attitude	Job Satisfaction	Work Load and Work Pressure Level	Performance Risk
Average Score Against 5 Point Scale	1.67	1.68	1.65	1.68	1.74
	66.7 %	66.4 %	67 %	66.4 %	65.2 %
Average %	66.32 % (60% - 80% Achievement)				
Performance	Very Good				

Production and Quality performance Improvements in TQM affecting factors	% of Performance Improvements	% of Performance not Improvements
Management and Employee Relations	66.7 %	33.3 %
Worker Attitude	66.4 %	33.6 %
Job Satisfaction	67.0 %	33.0 %
Work Load and Work Pressure Level	66.4 %	33.6 %
Performance Risk	65.2 %	34.8 %

Parameters (Variables)	Weightage	Resp. Avg. (500)	% of Performance in Progresses	% of Performance not in Progresses
A = Company's Objectives and Requirement	853	1.706	65.88 %	34.12 %
B = Guideline for planning of Quality Production	848	1.696	66.08 %	33.92 %
C = Technical Education and Training	838	1.676	66.48 %	33.52 %
D = Decision making process	852	1.704	65.92 %	34.08 %
E = Reducing wastage and defect rates	866	1.732	65.36 %	34.64 %
F = Reward to the employees for his work	856	1.712	65.76 %	34.24 %

G = Delegate's authority with responsibility to employees	785	1.570	68.60 %	31.40 %
H = Quality of raw material	837	1.674	66.52 %	33.48 %

Findings of The Study

The findings have been drawn from the analysis and data interpretations based.

- The respondent organizations in manufactures have adopted TQM as a guiding philosophy earlier to liberalization. The major constraints in the Indian steel sector in Nagpur region is to make full use of the potential of all employees have less faith and trust on the re-organization and award system. Lack of interest on the part of human resource reflects in managing the shop floor.
- From the all TQM affecting factors analysis confirmations about Production and Quality Performance till Improvements is requiring of all Manufacturing Companies in MIDC Area Nagpur Region. Without reducing % of TQM affecting factors they cannot achieve all companies' goals.

Conclusions

- Conclusion Based on research findings and discussion, it can be concluded that TQM practices have significant effect on product quality performance. These findings indicate that the degree of increase or decrease in the product quality performance is determined by all decided variables such TQM.
- Strong and consistent leadership with the successful implementation of TQM in the organization of the company has dominant effect in determining the performance of the quality of the product in manufacturing companies at MIDC Area Nagpur region. Quality improvement programs that have been planned for the company within the framework of TQM practices could be work well if managers and all employees can be able to support it.

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