

Effective Implementation of Total Quality Management in Manufacturing Companies at Coimbatore District – A Study

¹Ms. A. N. CHRISTY, M.Com., M.Phil., (Ph.D)

Research Scholar, PG & Research Department of Commerce, KunthavaiNacchiyaarGovt. Arts College (W)- Autonomous, Thanjavur, TamilNadu, India. christy.puh@gmail.com

²Dr. J.J.JEYAKUMARI

Research Advisor & Assistant Professor, PG & Research Department of Commerce, KunthavaiNacchiyaarGovt. Arts College (W)- Autonomous, Thanjavur, TamilNadu, India. jemimajj@gmail.com

Abstract - Total quality management (TQM) is a holistic and umbrella concept for sure development and prosperity of industries. Success is the hallmark of all the organizations practising TQM, which has lead them to alter their destiny and attain superiority. This study has focused on the effective implementation of TQM. The population of the study covers only the select manufacturing companies of Coimbatore district. The data required for the study was collected with the aid of the questionnaire and secondary sources. The study has paved way to identify the critical success factors for implementation of TQM and its impact on organizational performance.

Key Words: TQM Implementation, prosperity, success factors, organizational performance.

I. INTRODUCTION

Over the last two decades, an important aspect that determines the survival and growth of business organizations is quality. The economic development of a nation depends upon the implementation of quality management systems in all productive stages of industrial products.

TQM is an integrative management philosophy which relies on three key aspects, they are commitment to never ending involvement in quality to the customer, involvement of all the team members for achieving a common goal and continuous improvement to eliminate any error or defect.

Many researches has been carried out with respect to implementation of TQM and it was observed that higher customer satisfaction, better quality product and good market share were the benefits of adopting TQM in manufacturing companies. There is a need for complete turnaround in corporate culture and management approach as compared to traditional top management delegating tasks and employee merely executing them. Manufacturing companies in Coimbatore district has shown progress over the past years due to the increased interest in these industries. These companies play an important role in the economic development with respect employment and contribution to gain a market position.

The success of the manufacturing companies is determined on the implementation of TQM. The organizations can institutionalise TQM behaviours into every day practice of the job. TQM focuses on “doing the right things right the first time”.

This paper discusses the significance of TQM and its effectiveness in the select manufacturing companies of Coimbatore district.

Statement of the problem

Organizations worldwide strive for international prominence. Stiff competition that prevails in the corporate world is the greatest challenge faced by all the industries. Thus a technique which guarantees survival in world class competition is TQM. Implementation of TQM plays a key role in enhancing the effectiveness of an organization, as it is considered as the art of managing the whole to achieve excellence. There is a need for properly documented study on how TQM can be effectively implemented in manufacturing companies. This has motivated the researcher to investigate the factors that facilitate effective implementation of TQM and its impact on organizational performance.

Objectives of the study

1. To understand and study the various factors that facilitate effective implementation of TQM

2. To investigate the critical success factors in the implementation of TQM
3. To find out the impact of TQM practices on the company's performance

II. RESEARCH METHODOLOGY

The research was initiated with an in depth review of literature to acquire a general understanding of TQM. The study explored the factors that facilitate effective implementation of TQM. The methodology adopted for the study was exploratory and analytical.

SAMPLING DESIGN

The sampling technique used for obtaining the respondents required for the study was convenience sampling. The sample size was 300 respondents, which consisted of quality assurance managers and technician working in the selected manufacturing companies of Coimbatore district.

DATA COLLECTION

The list of manufacturing companies in Coimbatore district was obtained through secondary sources. The companies' which were applying quality programme in their business were selected initially for the purpose of the study. Primary data was collected by administrating a questionnaire designed on five point Likert scale. Secondary data was collected from websites, journals, magazines and annual reports.

III. REVIEW OF THE LITERATURE

Sugimori et.al deliberated the studies conducted in Australian and New Zealand manufacturing organizations that observed the effect of TQM practices on operational performance of a large number of manufacturing companies in Australia and New Zealand, and stated that the relationship between TQM practice and organisational

performance is significant, but all the categories of TQM practice were not particularly strong predictors of performance.

Valmohammadi.C (2011), in his study on "The impact of TQM implementation on the organisational performance of Iranian manufacturing SME's", has used seven TQM constructs which were leadership, process management, suppliers management, customer focus, employee management, communication and quality information system and tools and techniques.

Sadikoglu, Esin. andOclay (2014) stated the different TQM practices that significantly affect the different performance outcome and the main obstacles were lack of employee involvement, awareness and commitment of the employees, inappropriate firm structure and lack of the resources.

IV. DATA ANALYSIS AND INTERPRETATION

Table – 1

DISTRIBUTION OF RESPONDENTS BASED ON OPINION TOWARDS TOTAL QUALITY MANAGEMENT

Opinion	Yes	No
Quality consciousness	261 (87%)	39 (13%)
Inspection in measuring the quality of work	288 (96%)	12 (4%)
Awareness of quality management system	282 (94%)	18 (6%)

- 87% of the respondents were aware of the quality consciousness in the organization
- 96% of the respondents agreed that inspection is used as the tool for measuring the quality of work
- 94% of the employees were aware about the quality management system

Table - 2 DISTRIBUTION OF THE RESPONDENTS BY LEADERSHIP

level	Top management actively participates in quality management activities		Top management strongly promotes staff involvement in quality management activities		Communication links are established between employees and top management		Company fulfils its social responsibilities		Managers and supervisors empower employees	
	F	%	F	%	F	%	F	%	F	%
Strongly agree	75	25	57	19	-	-	75	25	75	25
Agree	186	62	189	63	102	34	135	45	153	51
Neutral	27	9	42	14	138	46	78	26	57	19
Disagree	12	4	3	1	48	16	9	3	12	4
Strongly disagree	-	-	9	3	12	4	3	1	3	1
Total	300	100	300	100	300	100	300	100	300	100

- ✓ 62% of the respondents agreed that top management actively participates in quality management activities
- ✓ 63% of the respondents agreed that top management strongly promotes staff involvement in quality management activities
- ✓ 46% of the respondents are neutral towards the opinion that the Communication links are established between employees and top management
- ✓ 45% of the respondents agreed that Company fulfils its social responsibilities

- ✓ 51% of the respondents agreed that Managers and supervisors empower employees

Table – 3 DISTRIBUTION OF THE RESPONDENTS BY SUPPLIER QUALITY MANAGEMENT

Level	Suppliers are selected on the basis of quality aspects		Company ensures that suppliers maintain high technical standards and meeting quality specification		Company regularly conducts suppliers quality audit		Company works closely with suppliers towards long term partnership and improvement		Suppliers provide relevant quality records and data	
	F	%	F	%	F	%	F	%	F	%
Strongly agree	69	23	78	26	51	17	54	18	48	16
Agree	210	70	174	58	171	57	123	41	156	52
Neutral	18	6	36	12	66	22	120	40	81	27
Disagree	3	1	9	3	9	3	-	-	6	2
Strongly disagree	-	-	3	1	3	1	3	1	9	3
Total	300	100	300	100	300	100	300	100	300	100

- ✓ 70% of the respondents agree that Suppliers are selected on the basis of quality aspects
- ✓ 58% of the respondents agree that Company ensures that suppliers maintain high technical standards and meeting quality specification
- ✓ 57 % of the respondents agree that Company regularly conducts suppliers quality audit
- ✓ 41% of the respondents agree that Company works closely with suppliers towards long term partnership and improvement
- ✓ 52% of the respondents agree that Suppliers provide relevant quality records and data

Table – 4 DISTRIBUTION OF THE RESPONDENTS BY PEOPLE MANAGEMENT

Level	The company concentrates on on-going development of personnel through extensive training		The concept of internal customer is well understood in the company		Communication is open and continuous		Occupational health and safety practices are excellent		Employee satisfaction is formally and regularly measured	
	F	%	F	%	F	%	F	%	F	%
Strongly agree	72	24	84	28	90	30	99	33	75	25
Agree	189	63	198	66	198	66	192	64	222	74
Neutral	36	12	15	5	9	3	6	2	-	-
Disagree	3	1	3	1	3	1	-	-	-	-
Strongly disagree	-	-	-	-	-	-	3	1	3	1
Total	300	100	300	100	300	100	300	100	300	100

- ✓ 63% of the respondents agree that the company concentrates on on-going development of personnel through extensive training
- ✓ 66% of the respondents agree that the concept of internal customer is well understood in the company
- ✓ 66% of the respondents agree that Communication is open and continuous
- ✓ 64% of the respondents agree that Occupational health and safety practices are excellent
- ✓ 74% of the respondents agree that Employee satisfaction is formally and regularly measured

Table – 5 DISTRIBUTION OF THE RESPONDENTS BY CUSTOMER FOCUS

Level	Product design development and delivery are based on meeting the customers' needs		Key customer requirements are identified		We measure customer satisfaction on a regular base		Wide variety of mechanism for customers to contact the company easily and effectively		After sales strategy are an important part of our business strategy	
	F	%	F	%	F	%	F	%	F	%
Strongly agree	72	24	120	40	60	20	66	22	81	27
Agree	171	57	141	47	177	59	159	53	165	55
Neutral	42	14	36	13	48	16	57	19	48	16
Disagree	15	5	+	+	15	5	18	6	-	-
Strongly disagree	-	-	-	-	-	-	-	-	6	2
Total	300	100	300	100	300	100	300	100	300	100

- ✓ 57% of the respondents agree that Product design development and delivery are based on meeting the customers' needs
- ✓ 47% of the respondents agree that Key customer requirements are identified
- ✓ 59% of the respondents agree that they measure customer satisfaction on a regular base
- ✓ 53% of the respondents agree that there are Wide variety of mechanism for customers to contact the company easily and effectively
- ✓ 55% of the respondents agree that After sales strategy are an important part of their business strategy

V. RECOMMENDATION

The results showed that most critical factors affecting TQM implementation were transfer of knowledge regarding policies and procedures. This is followed by maintaining relationship with suppliers for long term partnership and improvement. Employment empowerment plays an important role in the implementation of TQM and thus proper incentives can be given to boost the morale of the employees. Acquainting suppliers with the policies and procedures of TQM would lead to success of TQM. Involvement of customers is essential in the adoption of TQM, therefore the manufacturing companies can identify the key customer requirements and take initiatives to satisfy their needs. Thus these factors can help in the effective implementation of TQM.

VI. CONCLUSION

The implementation of TQM helps an organisation to bring about overall development and thereby meet the customers' needs to a greater extent. Quality is the expectation of the society and this can be met when an organisation adopts TQM coupled with digital innovation, as it can ensure higher efficiency and profitability. There is always a consistent relationship between digital innovation and organisational performance. Although quality management and digital innovation are two independent disciplines the ideas of the two can be interchanged for the uplift of the organisation. Quality management and the overall management system can facilitate digital innovation. It refers to an innovation enabled by digital technologies that leads to the creation of new forms of digitalisation. Process orientation and people involvement are the two principles for digital innovation which leads to concrete and clear outcomes. The findings of the study showcase the fact that there is a strong positive relationship between effective implementation of TQM and customer satisfaction.

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