

SUCCESS OF TQM ASPECTS IN INDIAN ORGANIZATIONS

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ABSTRACT

This research paper is an attempt to determine the philosophy for success of organisations in Indian context. Where, survey is done to find out the basic thinking of top-management through mission statements and quality policy. The results reflect that the top-management main concentration is towards satisfaction of customer (i.e. 43.90% in Mission-Statements & 34.15% in Quality Polices) and High quality products (i.e. 26.83% in Mission-Statements & 21.95% in Quality Policies). A model has been developed to explain the degree of attention to the aspects. This model helps to understand the relevant gaps in total quality management implementation. It identifies the aspects those are generally left alone by the Indian organisations. Identification of these aspects helps a lot while adopting the TQM as whole not as a part, to get life time results.

KEYWORDS: Total Quality Management (TQM) Aspects, Indian Organizations, Obstacles

‘Best will Survive’ is the slogan of the top class business organizations. In pursuit of excellence countries have set benchmark for enterprises to strive to achieve to be globally competitive. Now days, organizations are increasingly orienting themselves towards service to customers. Total Quality Management is creating a revolution in manufacturing field and service organizations throughout the world. Radical changes are being initiated in the large global organizations such as Motorola, Toyota, Honda and Xerox. The leaders of these and various other world class organizations are achieving large-scale transformations in the ways their business work. Those Indian companies that grasped this quality have successfully managed, ridden business recessions and annihilated the competition. Total Quality Management revolution is well under way in the Indian organizations; of course the key questions are:

- Whether they will succeed?
- Will most managers view TQM as a temporary phenomenon that will fade?
- Will it be seen as a new way of life for building world-class Indian organizations?

There is a need to find out the answers to these and most of other important questions by understanding the experiences of some selected Indian organizations; those are in the front line of quality revolution. A focus is needed on analyzing various techniques and strategies to be adopted by the Indian companies. Keeping the growing importance of TQM in view, the study of ‘TQM in manufacturing Industry; relevance, analysis and directions’

has been undertaken. The meaning of the study chosen for research can be further clarified by stating some of its elements. The study deals with current status of TQM practice and its implementation in manufacturing industries. Total Quality Management has been coined combining three words: Total, Quality and Management.

TQM (Total Quality Management; Continuous Improvement)

This term can be defined by breaking the phrase in to three terms, where by “Total” implies Safety, cost, productivity, delivery, corporate responsibility and design & service, “Quality” implies customer requirement are met exactly & The Level of Excellence and “Management” implies Plan & implementation of every resource of the organization towards continuous improvements.

Total: safety, cost, productivity, delivery, corporate responsibility and design & service.

Quality: The Level of Excellence of something.

Management: Plan & implementation of every resource towards continuous improvements.

Today’s total quality management practices, encompassing the structure of organizations, company policies, procedures, managerial behavior and other manifestations of organizational cultures, are legacies of many thinkers and quality experts. It started from the concept of quality control, was transformed into quality assurance and, finally, to total quality control before assuming its present form-Total Quality Management.

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TQM is a total management system that sets the direction of the company, tunes its engine, and helps realize its vision. Confederation of Indian Industry (CII) defined TQM as meeting the requirements of the internal and external customers consistently by continuous improvement in the quality of work of all employees. TQM can be conceptualized into the following processes:

- Quality process: - for understanding who the customer is, what are his needs and taking steps to completely satisfy his needs.
- Management process: - for continuous improvement: the term management refers to managing continuous improvement and does not address any specific organizational level.

- People process: - for initiating and maintaining the TQM. It is carried out through involvement of all employees on the basis of all three values, namely intellectual honesty, self control and respect from others.

Thus TQM is both a philosophy and a set of guiding principles that represent the foundation of a continuously improving organization. TQM integrates fundamental management techniques, existing improvement efforts, and technical tools under a disciplined approach focused on continuous improvement. The various definitions and statements have been tabulated in table 1.

Table 1.1: Overview of Total Quality Management reported in the Literature

Author	Year	Overview
Yang	2005	TQM is a holistic approach to maximize customer satisfaction.
Demirbag et al.	2006	TQM is a aspect, holistic approach, management philosophy and necessary tool for organizations survival.
Yusuf et al.	2007	TQM is an integrated management approach and a long-term process that is based upon a set of techniques.
Jung et al.	2008	TQM is a recognized innovative management methodology for improving operational performance.
A. and Hassan	2009	TQM is a concept based upon continuous improvement.
Dakic	2010	TQM is a management philosophy with a set of tools and processes meant to bring the consumer satisfaction and continuous improvement.
Breja et al.	2011	TQM is an integrated process with the use of continuously evolving tools and techniques.
Ahuja	2012	TQM is a customer-centric approach encircling a set of management policies.
Kaur et al.	2013	TQM is an approach that seeks to improve quality and performance.
Shrivastava and Gorantiwar.	2014	Organizations have promoted TQM implementation after convinced by its abundant benefits like competitive potential, solution to quality and productivity problems with effect on role stressors components too.
Ebrahimi et al.; Jiménez et al.	2015	
Choi et al.	2016	The perceived organizational support and reward increases organizational members' affective commitment to TQM and top management should support employees' development and involving them in the process of TQM implementation.
Ramkumar & Savithri	2017	The TQM approach has "four pillars of TQM" viz., synergistic relationships, commitment to continuous improvement, system approach and commitment of top management.
Gupta et al.	2017	TQM is deliberated by most that improvement tool for industrial performance, an integrative management technique and a systematic approach.
Gupta et al.	2018	TQM) improves product quality, expands business goodwill, provides competitive edge and increases customer-base with satisfaction.
Gözükara et al.	2019	TQM is directed at quality consciousness throughout all organisational processes. A successful TQM practice requires a culture that can adapt to changes and promote innovation.

There are various other names from the history of contributors in total quality management literature and its implementation in organizations. The prominent names include Feigenbaum, Ishikawa, Genichi Taguchi, Shigeo Shingo, and Oakland. All these experts gave different concepts, theories and approaches adding to the vast sea of quality management.

Total quality management prepares the organization to integrate all its activities and functions in all respects, and at various levels, for total quality effectively. Thus TQM is; continuous improvement activities, involving everyone (managers, workers and all other resources) in the organization.

On the basis of literature review important aspects of TQM are identified as under in the table 2.

Table 2: Important TQM Aspects

1	Top management leadership and commitments
2	Total employee involvement
3	Employee empowerment
4	Continuous improvement
5	Customer focus and satisfaction
6	Education and training
7	Small group activities
8	Quality circle
9	Team work
10	Just in time
11	Statistical process control
12	Business process reengineering
13	Recognition and rewards
14	Bench marking
15	Vendor development
16	Daily process management
17	Working environment
18	Feedback system
19	Transparent communication
20	Suggestions and schemes
21	Quality function development
22	Failure mode effect analysis
23	Seven quality control tools
24	Taguchi methods
25	Design of experiment

26	Zero defect
27	Seven management tools
28	Total productive maintenance
29	Quality processes planning
30	Cost of quality

PROBLEM STATEMENT

TQM can be applied in any sector in this challenging globalization world such as manufacturing, services, research & development and education, etc. Among these, Indian manufacturing industries are trying hard to use many means to uplift the quality. To change the attitude and culture meant for quality and customer satisfaction is a great task in Indian context that is easily addressed by TQM.

OBJECTIVES

- To determine top-management thinking through mission statements and quality policy
- To determine the obstacles in implementation of TQM concept in Indian context

RESEARCH DESIGN AND METHODOLOGY

Figure 1 shows the research design & methodology.

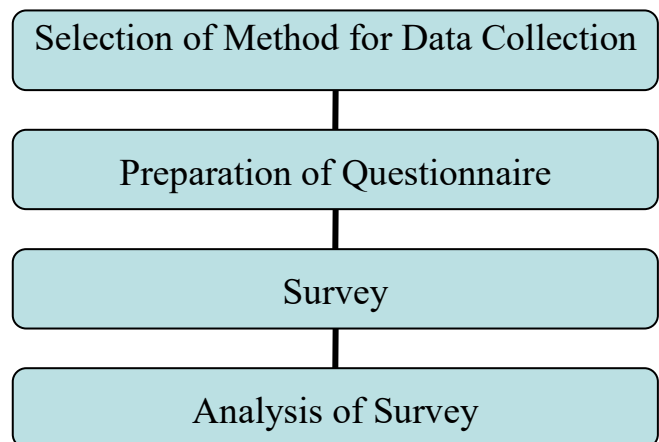


Figure 1: Research Design & Methodology

Method of Data Collection

The least time consuming and least expensive option for data collection is when, secondary data sources are available, which contain relevant information relating to researchers’ hypotheses and questions. Secondary data sources are generated through a number of mechanisms i.e. usages of computers, internet services, national/international publications and annual reports etc. On the other hand, when appropriate secondary sources are not available to effectively answer one’s research question then primary data collection approach is used. Mail survey, Telephonic interviews; personal interviews are frequently used methods of data collection.

For present work, data was required on a wide variety of aspects of total quality management including data on - mission statement, quality policy, quality objectives and many other related aspects. Here arises a need to identify the sources of data and design approach for collecting that data. Since secondary data did not help to answer the research question, we made use of primary data. Additionally, we selected a survey based approach for data collection with two reasons - One to test our data using statistical method, large sample sizes were needed and second as survey approach was less time consuming and least expensive.

Preparation of Questionnaire

For survey a questionnaire on Total Quality Management in industries was prepared. This questionnaire is based on the aspects directly related to total quality management like mission statement, quality policy, objectives and other aspects stated in table 2.

Survey

Survey helped to find out:

- Importance being given to mission statement.
- Importance being given to quality policy.
- Importance being given to TQM aspects founded out in literature review.

The questionnaires were mailed to 50 different industries covering the fields of automobile engineering, textile engineering, electrical and electronics engineering, light weight engineering and heavy weight engineering works. Forty one responses (Response rate = 82%) to this

questionnaire were obtained. Majority of these companies were located in north India and few industries responded from other parts of country.

Results of survey is analysed and discussed further in sections like mission statement, quality policy, importance of various aspects of total quality management and quality objectives and results are tabulated in table 3 to 7.

Results Survey & Analysis of Results

Mission Statement Focus

Mission Statement briefly mentions the intent of company regarding the role it wants to play in chosen field of business. Key components of a mission statement are customers, markets, product or services, technology, economic goals, self-concept, image, philosophy, effectiveness and inspiration that are given in the table 3 and figure 2.

Table 3: Mission Statement Focus

Common objectives	Focus	
Customer Focus & Satisfaction	18	43.90%
High Quality Product	11	26.83%
Cont. Improvement	5	12.20%
Employee Training	4	9.76%
Employee Involvement	3	7.32%
TOTAL	41	100.00%

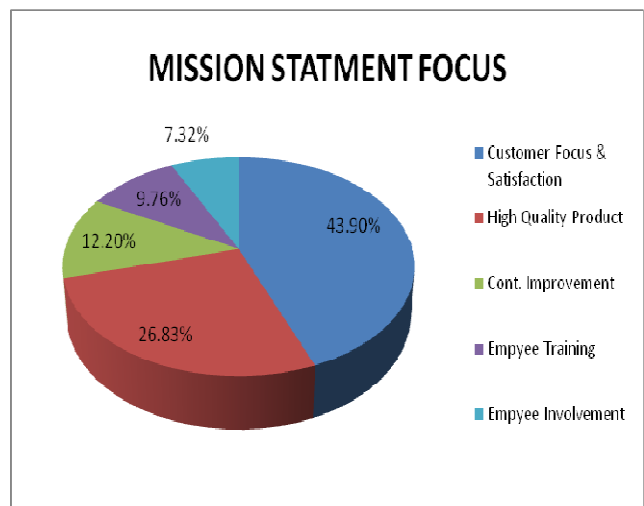


Figure 3: Mission Statement Focus

Quality Policy Focus

The policy is a statement of intent, describing the overall intention and direction of the company as regards quality management systems of its products and services. A sound quality policy, together with the organization and facilities to put it into effect, is a fundamental requirement, if a company is to begin to implement TQM. It has been observed that Indian companies generally include specification of basic product or service, various companies' goals, specifies the basic beliefs, values and aspirations as major components in their mission statements that given in the table 4 and figure 4.

Table 4: Quality policy Focus

Common objectives	Focus	
	Count	Percentage
Customer Focus & Satisfaction	14	34.15%
High Quality Product	9	21.95%
High Productivity	8	19.51%
Cont. Improvement	4	9.76%
Employee Training	4	9.76%
Employee Involvement	2	4.88%

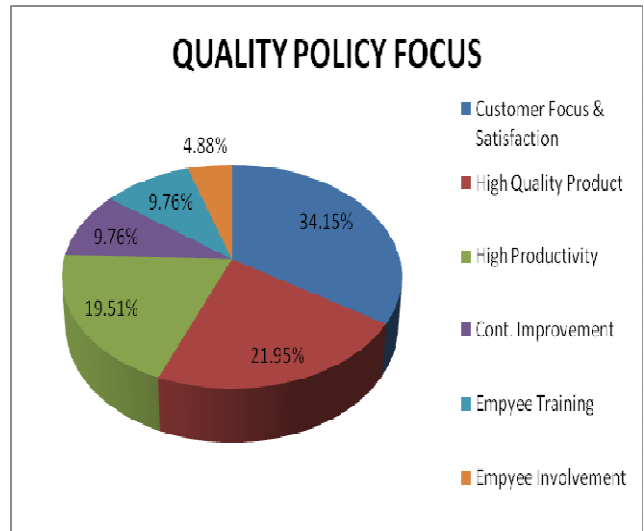


Figure 4: Quality policy Focus

TQM Aspects Focus

Within the last two decades, TQM has evolved as a strategic approach in most manufacturing and service organizations to respond to the challenges posed by competitive business world. Survey shows the importance of various aspects founded out from literature review as given in table 5 and figure 5.

Table 5: Importance to Aspects of TQM

S.N.	Aspects	Very important		Important		Less Important		Least Important		Not Important	
		Count	Percentage	Count	Percentage	Count	Percentage	Count	Percentage	Count	Percentage
1	Top management leadership and commitments.	29	71%	11	27%	1	2%	-	-	-	-
2	Total employee involvement	24	59%	15	37%	2	5%	-	-	-	-
3	Employee empowerment	10	24%	14	34%	12	29%	5	12%	-	-
4	Continuous improvement	14	34%	16	39%	9	22%	2	5%	-	-
5	Customer focus & satisfaction	20	49%	16	39%	3	7%	2	5%	-	-
6	Education and Training	22	54%	17	41%	2	5%	-	-	-	-
7	Small group activities	16	39%	21	51%	4	10%	-	-	-	-
8	Quality circles	14	34%	22	54%	4	10%	1	2%	-	-
9	Team work	13	32%	22	54%	4	10%	2	5%	-	-
10	Just in time & waste elimination	12	29%	23	56%	5	12%	1	2%	-	-
11	Statistical process control	12	29%	17	41%	9	22%	3	7%	-	-
12	Business process re-engineering	24	59%	15	37%	2	5%	-	-	-	-
13	Recognition and rewards	11	27%	20	49%	9	22%	1	2%	-	-

14	Bench marking	12	29%	20	49%	8	20%	1	2%	-	
15	House keeping	12	29%	13	32%	14	34%	2	5%	-	
16	Vender development	15	37%	20	49%	4	10%	2	5%	-	
17	Daily process management	10	24%	15	37%	15	37%	2	5%	-	
18	Working environment	9	22%	17	41%	10	24%	4	10%	-	
19	Feedback system	10	24%	14	34%	13	32%	4	10%	-	
20	Suggestions Scheme	8	20%	14	34%	12	29%	7	17%	-	
21	Quality process planning	8	20%	14	34%	17	41%	2	5%	-	
22	Cost of Quality	21	51%	10	24%	6	15%	4	10%	-	
23	Quality function deployment	4	10%	17	41%	14	34%	6	15%	-	
24	Failure mode effect analysis	12	29%	14	34%	13	32%	2	5%	-	
25	Seven Quality control tools	12	29%	15	37%	13	32%	1	2%	-	
26	Taguchi method	11	27%	15	37%	13	32%	2	5%	-	
27	Design of experiments	8	20%	15	37%	14	34%	4	10%	-	
28	Zero defects	9	22%	16	39%	13	32%	3	7%	-	
29	Seven management tools	10	24%	12	29%	14	34%	5	12%	-	
30	Total preventive maintenance	8	20%	18	44%	12	29%	3	7%	-	
TOTAL		400	32.5%	488	39.7%	271	22.0%	71	5.8%	0	0%

Importance in Composite to TQM Aspects

It is clear that overall 32.5 percent industries accept various aspects as ‘very important’, 39.7 percent as ‘important’, 22.0 percent as ‘less important’, 5.8 percent as ‘least important’ and no aspect was found as ‘not important’.

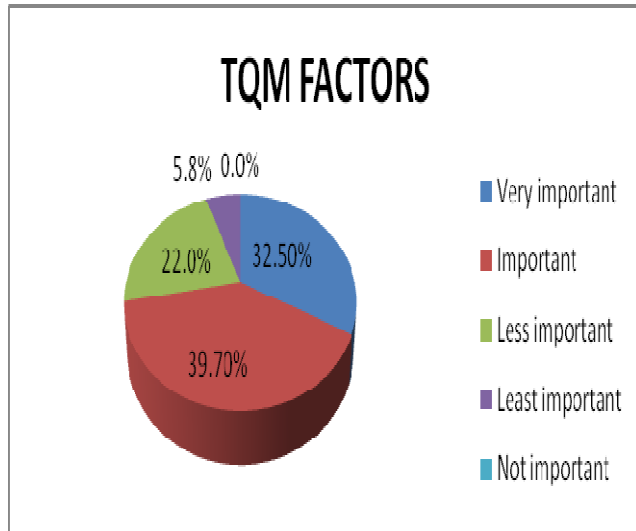


Figure 5: Importance to Aspects of TQM

It is evident that in all the organisations responded there is no organisation which left any TQM aspect alone,

though there are different degrees of focus. It would not be of great importance to study the aspects independently, as on some aspects the focus is very low, on the other hand the focus on the other aspect of the same category is high. Therefore, it will be better to categorize the aspects and to study them in totality. However, this survey is very important to understand the philosophy of the organisation in context of its “Mission Statement”, “Quality Policy Statement” and its focus on the aspects of TQM.

The quality objectives should relate to actions and quality targets required for achieving the quality goals and improvements for products, processes and systems of organization. The mission provides the vision and guiding light and sets down the core values, but it must be supported by measurable objectives that are highly and inarguably linked to it. The objectives help to translate the directional and sometimes “loose” statements of the mission into clear targets, and in turn to simplify management’s thinking. They can later be used as evidence of success for the team, in every direction, internally and externally.

Classification & Grouping of TQM Aspects

Survey helped to understand the importance of various aspects of total quality management. Table 6 shows the important aspects, divided into ten groups for detailed

research. The aspects grouped according to their similarity of impacting on Total Quality Management implementation in industries.

PROPOSED MODEL

The implementation of Total Quality Management in an organization is not a short term project. It requires persistent and committed efforts to make the dream of TQM implementation a success. World class companies install quality processes and go on to achieve and maintain accelerated improvement, they go through patterns of common experience. Where, developed analytical model reflects the state of mind of the Indian management.

Model of Degree of Attentiveness

During literature survey, it has been observed that many of the Indian firms that are taking strategic initiatives to implement TQM in their business units are not able to sustain these initiatives because they often lack in

articulating the critical aspects that are needed for continual pursuance. As a result, total quality management activities have become stand alone and programmes have lost their defined objectives. The review of literature leads to the research question that as to what extent the aspects of TQM are in practices.

In imperfect-competitive environment of market, Customer satisfaction & power though considered important but more concentration to some other aspects of TQM is provided by the organisations. Employees on the one hand play important role. The attitude of employee as a team can play an important role; it is evident through literature review. Senior management leadership is crucial for successful implementation of TQM. Providing good leadership means having close involvement in the implementation process to maintain momentum. Fast result techniques are in mainly in use in Indian environment. Table 6 is show the attention for the groups of TQM aspects.

Table 6: Score of for various groups of TQM

Group	Maximum Score	Score Obtained
G-I-Managements effective participation	410	358
G-II-Employees effective	410	320
G-III-Customers' power	410	344
G-IV-Reward schemes	410	237
G-V-Communication system	410	241
G-VI-Vendors' power	410	254
G-VII-Statistical quality control	410	304
G-VIII-Fast result techniques	410	350
G-IX-Quality planning and cost involved	410	279
G-X-Analytical techniques	410	218

Analytical Procedure for Attentiveness Testing

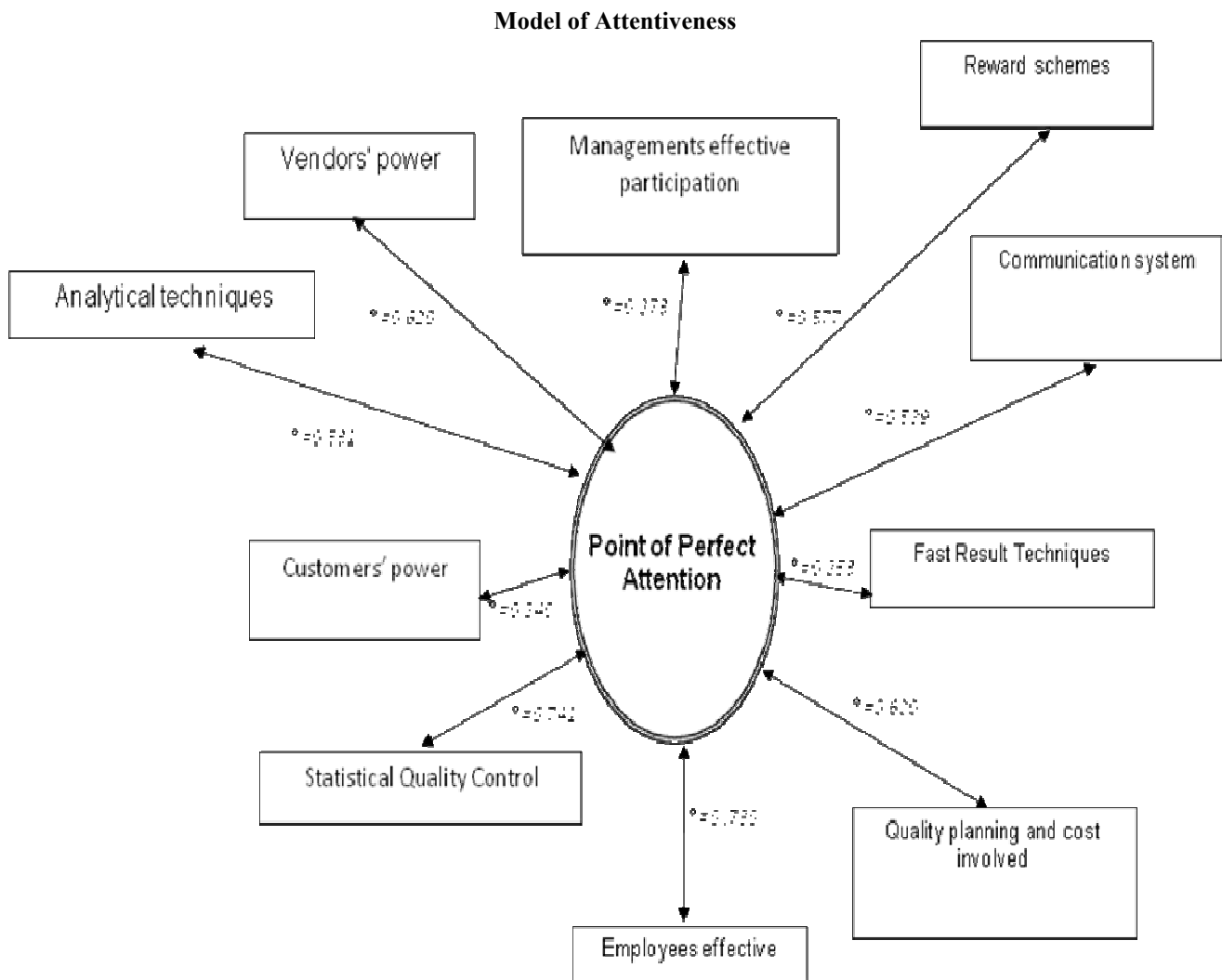
An analytic procedure is adopted for calculations involved in model. The survey is conducted on 41 organisations. Ten groups of aspect containing 10 questions each was used for this purpose.

In this way, if all the aspects in a group are implemented by all the 41 organisations then that group

may get 410 points (10 aspects x 41 organisations). Thus 410 points is a Point of Complete Attentiveness for any Group. Degree of attentiveness is derived by comparing the points obtained by the group to the maximum points available that can be obtained. Table 7 shows the degree of attentiveness among the groups. Figure 6 shows the model of Degree of Attentiveness.

Table 7: Degree of Attentiveness for various groups of TQM

Group	Maximum Score	Score Obtained	Calculations	Degree of Attention
G-I-Managements effective participation	410	358	= 358 / 410	0.873
G-II-Employees effective	410	320	= 320 / 410	0.780
G-III-Customers' power	410	344	= 344 / 410	0.839
G-IV-Reward schemes	410	237	= 237 / 410	0.578
G-V-Communication system	410	241	= 241 / 410	0.588
G-VI-Vendors' power	410	254	= 254 / 410	0.620
G-VII-Statistical quality control	410	304	= 304 / 410	0.741
G-VIII-Fast result techniques	410	350	= 350 / 410	0.854
G-IX-Quality planning and cost involved	410	279	= 279 / 410	0.680
G-X-Analytical techniques	410	218	= 218 / 410	0.532



Discussion on Model

Management Effective Participation

Model shows that there is a high degree of attention (0.873) to the Top Management involvement. Most of the respondent companies have treated top management leadership and commitment as the foundation of their TQM implementation programme. The strong degree shows that management consider seven management tools can create positive working environment for continuous improvement and customer satisfaction.

Employee Effectiveness

Employee effectiveness is the highest degree of attentiveness i.e. (0.780). The positive attitude and self belongingness can be created by management in employees, but lasts long only due to employees. Employees after proper training can create total quality management implementation a success by their involvement in education and training programmes, quality circles, team work, small group activities, suggestion schemes etc.

Customers' Power

Customers' power is no doubts have a high degree of attention. It must have a degree of highest value but, in imperfect-competitive environment of market in India, Customer satisfaction & power is containing a degree of attention at 0.839.

Reward Schemes

Rewards are a form of employee's involvement in which the organization identify and recognize employees, who have made positive contribution in the success of organization. Results shows that this scheme is strong degree of 0.578

Communication System

Quality and feedback system or communication system are inextricably linked. Quality is about conceitedness' and in a customer centred organization, part of the culture is to get people feel that they can just talk to you, at whatever level you are and they are making a contribution to business. The results show that a degree of 0.588 is prevailing in the organisations.

Vendors' Power

Vendor quality programmes are essential as TQM cannot be achieved in vacuum. Vendors may not essentially use a particular quality approach adopted by the company to ensure quality but there should be systematic quality process in place that company's standards are met. Vendor is an important ingredient of success of any total quality management programme. The vendor degree is significant at 0.620.

Statistical Quality Control

Quality control techniques like statistical process control, daily process management, seven quality tools, taguchi method, zero defect etc has a strong degree of 0.741

Fast Result Techniques

Fast result techniques like business process reengineering, just in time, bench marking, housekeeping, quality function deployment and total preventive maintenance can put direct effect on quality, costs and customer satisfaction. As the techniques are able to produce good results in a short span of time and keep the motivation of management and employees at top and help to get total quality management implementation program as a booster. At a degree of .853, it is at great focus in Indian context.

Quality Planning and Cost Involved

A competitive product or service based on a balance between quality cost and planning aspects is the principal goal of responsible management. The analysis of quality related cost and planning are significant management tools when TQM is the goal. The degree of organisations attention to this group is at 0.680.

Analytical Techniques

Analytical techniques are standard techniques for revealing how variation in process parameters affects the final product. This understanding enables products to be designed to be robust; that is insensitive to variation in those production parameters that are hard to control, and therefore easy to produce consistently. Design of experiments identifies which process parameters must be controlled to obtain consistent results. Failure mode and effect analysis is to analyze products, services and processes to determine possible modes of failure and their effects on the performance of the product or operation of

the process or service system. The degree of attention to this group is at a low of 0.532, It is at low degree and clearly shows that focus of all industrial groups regarding these aspects are lesser than other aspects.

DISCUSSION AND CONCLUSION

Model shows the philosophy of Indian Industries in context of TQM. It shows that aspects of TQM have scattered consideration. Though the small processes have started with the positive change in attitudes towards total quality, but lot of work is required to be done. It has been observed that many of the Indian firms that are taking strategic initiatives to implement TQM in their business units are not able to sustain these initiatives because they often lack in articulating the critical aspects that are needed for continual pursuance. As a result, total quality management activities have become stand alone types and the programmes have lost their defined objectives, model portrays this gap.

This model presented here provides a direct approach to top management to implement TQM programme through more concentration to the aspects those are generally left alone. It is strongly recommended that the Indian industry must make all efforts to implement TQM, may be in a phased manner. TQM cannot be applied hurriedly and it cannot be success without providing the importance to all the aspects. Change of mindsets required enough time to believe on the concepts of TQM. Model helps us a lot to understand the relevant gaps in total quality management implementation. It identifies the aspects those are generally left alone by the Indian organisations. Identification of these aspects helps a lot while adopting the TQM as whole not as a part, to get life time results. Also, survey reflects that top-managements' main focus is on customer satisfaction i.e. in Mission statements 43.90% focus is alone on customer satisfaction and in Quality Policy 34.15% is alone on customer satisfaction.

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