TOTAL QUALITY: AN EFFECTIVE MANAGEMENT TOOL

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by
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BIOGRAPHY:

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ABSTRACT:

The purpose of this paper is to discuss total quality management (TQM). Very few service companies have been able to reap full benefits of TQM. One major reason for its inadequate success is that of trying to implement in service companies techniques that have been successful in manufacturing. In manufacturing, emphasis of TQM is on "zero defects". Control charts and sampling are the major tools of quality control. However, in services, emphasis is on "zero defections". Focus is on customer satisfaction and team approach. TQM can boost profits and improve customer satisfaction. However, success depends on knowing how to implement TQM in service companies.

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1. Introduction

Customer satisfaction has become a dominant strategy of insurance companies to overcome competitive challenges of 1990's. Quality of service may be the only enduring feature that differentiates one insurance company from the other. Skyrocketing advertisement and promotion costs, rising travel and manpower costs, aging of "baby-boomers", price deregulations and opening of international boundaries have made acquiring new customers more expensive than retaining existing ones. Moreover, new customers typically generate less revenue than older customers. Customer defections have more impact on a company's bottomline than volume of business, market share, unit costs and several other factors. For example, by reducing defections by 5%, an insurance brokerage can increase profits by hefty 50%. Therefore, "zero defections" has become a buzz word among insurance company executives. Consequently, insurance companies have to become more responsive to their customers, exhibit improved organizational excellence, maintain superb relationships with their contractors and reinsurers, reduce their costs and make employees motivated. These are formidable demands on any executive who has to run an insurance

Deming's Fourteen Points

1. Continuously develop objectives for improvement.
2. Employ a new philosophy for quality improvement.
3. Eliminate mass inspection. Instead use statistical methods to improve services and reduce defects.
4. Do not select suppliers based on price alone.
5. Continuously improve service system.
6. Train employees on the job.
7. Improve leadership.
8. Eliminate fear so that employees are free to ask questions and make suggestions.
9. Reduce barriers between departments, suppliers and customers.
10. Eliminate slogans.
11. Eliminate numerical quotas for service.
12. Encourage employees to take pride in their work.
13. Institute training programs for self-improvement.
14. Act to achieve transformation.

company. The purpose of this paper is to discuss total quality management (TQM) as a tool to improve customer satisfaction.

2. Definitions of Quality

A recent ad by CIGNA Corporation "The pencil costs 14 cents. The eraser, millions" epitomizes total quality management (TQM). TQM stresses importance of doing right things right. It emphasizes doing them efficiently. The aim is to delight customers with your product or service. Implementation of quality control requires

support from all people in an organization. Corporatewide quality control is called total quality management.

Juran defines quality as "fitness for use". The extent to which a service satisfies a customer as service is performed defines "fitness for use". The "fitness for use" is determined by customers and not by an insurance company. Juran also outlines trilogy for quality management consisting of *Quality Planning, Quality Control and Quality Improvement*. Quality planning involves identification of customers and their needs, and development of products to satisfy customer needs, and processes to produce those product attributes. Quality control involves evaluation of the gap between actual and targeted quality performances and the actions to fill the gap. Quality improvement deals with development of infrastructure, identification of improvement goals, establishment of project teams and allocation of resources to implement quality improvement projects.

Deming characterizes quality as "continually meeting customers' needs and expectations at a price they are willing to pay." His philosophy stresses building quality into a system rather than inspecting for quality and then blaming employees for problems. He emphasizes process measurement, classification of errors into avoidable and unavoidable ones and elimination of the former. According to Deming, performance of an employee depends heavily on the system and therefore performance reviews are unproductive. Deming proposes fourteen points to serve as a guidepost for quality management.

Crosby considers TQM as a strategic and integrated management

system for achieving customer satisfaction. He emphasizes involvement of all managers and employees and use of quantitative methods. He identifies fourteen steps for achieving zero defects which involves establishment of quality teams, measurement of existing quality, estimation of quality costs, elimination of errors and repetition of the process.

Garvin defines product quality in terms of eight dimensions: (1) performance, (2) features, (3) reliability (4) conformance, (5) durability (6) serviceability, (7) aesthetics and (8) perceived quality. Performance represents primary operating characteristics. For an insurance policy this might mean coverage, comprehensiveness and readability. Features describe "bells and whistles". In an insurance policy they might consist of yearly financial planning advice, toll-free phone number and so on. Reliability characterizes the probability that a product will function without failure. Rating of an insurance company is a measure of this form of quality. Conformance represents the degree to which a product fulfills a given standard. Durability refers to the length of time a product will last. Serviceability stands for ease of repair. Aesthetics refers to the beauty of the product and perceived quality characterizes what customers think about the product or service quality.

Defining quality of insurance products and services is hard. Policies are not used by customers on a daily basis. They are read typically when they need to be renewed or claims need to be filed. A customer perceives quality of an insurance policy in terms of service he receives pertaining to the policy. Differences among

policies of different companies are very few. Companies have streamlined their procedures to implement policy terms and there is very little contact between customers and a company. A customer is likely to drop a product because of poor service rather than poor policy. As competition among insurance companies becomes intense, customers expect high level of service. Therefore, quality of an insurance product or service should be measured in terms of fulfillment of customer expectations.

3. Costs of Quality

Very few companies collect quality costs. Costs of quality measure the expenditure as a result of poor quality from the corporate level down to the divisions and specific departments. The costs can be broadly classified under the price of conformance, price of nonconformance and lost revenue. The price of conformance involves cost incurred to reduce mistakes. Such costs include those relating to prevention, inspection and appraisal. The price of nonconformance can be classified under internal failure and external failure costs. The internal failure costs include costs of correcting errors when a mistake is found before the service is rendered to the customer. External failure costs include costs as a result of defective service delivered to the customer. The lost revenue represents costs as a result of customer defections and failure of potential customers to make contacts.

4. TQM Tools

There are several tools to ferret out problems, redesign products and services and improve processes. Brainstorming, fishbone diagram, flowchart, run sheet, Pareto analysis, control

chart and histogram are some of the tools that can help to zero in on quality problems. Plan-Do-Check-Act (also known as Deming Cycle) Cycle can help to achieve continuous improvement by setting goals to reach higher levels of performance. Quality function deployment helps to concentrate on customer needs while developing new services. Benchmarking can help a company to set realistic goals by copying companies recognized to have the best practices.

▷ Brainstorming

Brainstorming is a systematic approach to generate ideas from a group. A brainstorming group consists of individuals who can help to develop ideas relevant to a problem to be solved. Each individual is encouraged to suggest ideas without regard to their validity. No criticism or discussion of ideas is allowed and all ideas are meticulously recorded. After all ideas are collected, they are critically reviewed. Brainstorming is a method to identify problems, develop ideas and improve creativity. The brainstorming technique can be enhanced using storyboarding. In this technique ideas submitted by each participant are recorded on an index card without the name of the contributor. Then each card is categorized into different theories and then they are prioritized based on projects at hand. Storyboarding is an effective technique for developing ideas from groups as it provides anonymity to contributors. Nominal group technique helps to develop solutions to sensitive issues. In this technique, each person writes his idea on an index card. Ideas are then selected using secret ballot.

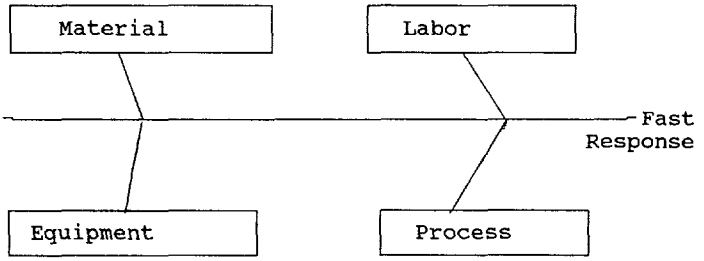
▷ Fishbone Diagram

Fishbone diagram is a graphical approach to represent "cause

and effect". The effect is desired outcome and causes are the spines. Broadly, causes can be categorized into materials, processes, labor and equipment. The diagram below illustrates a fishbone diagram. Most diagrams in practical applications will have more branches. There will be a single outcome such as turnaround time that we wish to improve or eliminate. We would like to indicate as many causes as possible without making the diagram too complicated. A well drawn fishbone diagram can help to detect causes of poor quality quickly so that corrective action can be taken. Structure tree diagram is another graphical approach to identify causes of a problem. In structure tree diagram, each problem is subdivided into subproblems and then causes of each subproblem are identified.

▷ Flow-Chart

A flowchart is a logical starting point for analyzing current processes. Flowcharts indicate various steps to be performed to accomplish a task. They also display precedence relationships among various steps. They are useful to identify processes that add costs rather than value.



Fishbone Diagram

▷ Run Sheet

A run sheet helps to identify trends in the data. For example, the number of telephone calls received each day could indicate busy times and need for increased operators.

▷ Pareto Analysis

The pareto principle states that a few causes account for much of problems. This is sometimes called 20/80 rule to describe that 20 percent causes are responsible for 80 percent damages. In a Pareto analysis, a large number of causes need to be investigated. These analysis can be performed in terms of organizations such as divisions, branches, employees, functions etc. The Pareto analysis helps a company to identify areas where most problems are concentrated. When a Pareto diagram is used for presentation purposes, it is desirable to use dollar amounts. Pareto analysis is extensively used in the control of inventory and goes by the name "ABC Analysis". A company can use Pareto analysis to identify important customers or agents by analyzing their revenues.

▷ Control Chart

A control chart essentially presents the expected range of variations in a stable process. A process is stable when all the data points fall within the prescribed control limits. Control chart is an excellent technique to monitor a process which is subject to variations. The control chart is a graphical representation of "hypothesis testing".

▷ Histogram

A histogram is simply a bar chart in which the height of each bar represents the frequency of each class. Histograms can be drawn

using popular software such as Lotus 123.

▷ Plan-Do-Check-Act Cycle

PDCA Cycle is an effective procedure to improve service process. The fist step in the PCDA cycle is to identify problems and set goals. The next step is to learn how the process is working. The next step is to analyze whether step can be completely eliminated or improved. Finally a proposal is prepared, implemented on pilot basis and if the proposal is successful, the whole process is repeated. Using PDCA cycle, American Family Insurance Group has eliminated more than 5000 pieces of mail from weekly flow.

▷ Quality Function Deployment

Quality function deployment (QFD) is a tool to ensure that customer needs and expectations are incorporated in the product or service. QFD is also referred to as "house of quality" since its visual planning matrix looks like the blueprint for a house. House of quality helps to connect customer requirements and expectations and performance targets in one easy-to-read diagram. By completing house of quality, sales, marketing, customer service, product management and finance departments can sit together and develop products that satisfy customer needs. A QFD process starts with survey of customers to understand what they value in an insurance policy. Each wishlist is then related with policy terms and service features. Competitor's policies are evaluated against customer requirements. A team is formed to come up with policies that beat competitor's policy. In short, QFD involves identification of customer requirements, determination of service requirements, conception of relationship between customer

△ Strong Rel. □ Medium Rel. ■ Weak Rel.		FUNCTIONAL CHARACTERISTICS				SATISFACTIO			
		Load	Check writing	800 number	Impor-tance	we	A	B	C
Cust. de-mands	Cost	△			7	5	4	3	5
	Return	△			10	3	4	2	2
	Flexibility		△		5	4	5	3	2
obje-ctive mea-sures	Our mu. fund	No	Yes	Yes					
	Comp. A	2%	No	Yes					
	Comp. B	5%	Yes	Yes					
	Comp. C	No	No	Yes					

SCALE 1 TO 5 (5=BEST)

House of Quality for Mutual Fund Customer Attributes

expectations and policy terms, development of service requirement measures, building house of quality and making tradeoffs between service requirements, evaluation of competitors and determination of final service terms and specifications.

▷ Benchmarking

Benchmarking is a process of studying products, services and practices at other companies to identify approaches to improve one's own products, services and practices. By comparing against the best, a company is able to set realistic performance goals already achieved by others. The benchmarking involves identifying function to be studied, determining factors responsible for its effectiveness, selecting best-in-class companies against which benchmarking plans to be done, measuring own performance, evaluating the performance of the best-in-class companies and

identifying gaps in performance, defining actions to be taken to close the gap and implementing action programs. There are four approaches to benchmarking. First approach focuses on internal operations, the second concentrates on a specific competitor and compares own product or process against that of the competitor, the third evaluates functional area against that of the industry leader and finally the fourth approach compares own function or process against that of any company in any industry. A recent international study points out that in order to improve performance through benchmarking, a company must have quality oriented infrastructure in place. Otherwise, benchmarking is likely to create chaos as employees, systems and practices may not be good enough to meet higher performance goals.

5. Gauging Customer Satisfaction

Some tools to measure customer satisfaction include defection analysis, gap analysis and surveys. Insurance companies are changing their focus from developing new policies and extending existing ones to ones to pleasing their customers. It is far more expensive to acquire a new customer than to retain one. Companies can boost their profits by simply retaining a few more percent of their customers. Industry studies indicate that services which fail to emphasize customer's viewpoint, measure quality in terms of defects rather than customer satisfaction and have no formalized quality control system are likely to be perceived poorly by customers. The services which fulfill customer expectations, measure quality in terms of customer viewpoints and use quality control for all processes tend to be rated highly by customers.

Since a company cannot retain customers by force, the only way a company can reduce its defection rates is to outperform its competition. By constantly soliciting feedback from defecting customers, a company can zero in on its weaknesses and take action to improve its performance.

▷ Defection Analysis

Most insurance companies do not analyze costs of losing a customer. The balance sheet of a company does not capture the value of loyal customers. Most accounting systems provide costs and revenues on a periodic basis and disregard the expected profit potential of a customer over his or her lifetime. Long time customers typically generate more income than new customers. Since they have confidence in their company, they are willing to pay higher premiums. They also provide free advertisement through referrals. Therefore, a customer real worth include profit margins from his business, increased revenue, increased profits as a result of economies of scale, profits from recommendations, and profits due to price premiums. Therefore, defection analysis is one of the surest ways of identifying features customers value and focusing on ways for continuous improvement. This way it is possible to analyze expenditure on quality improvements as investments rather than costs.

In order to perform defection analysis, a company should collate information about customers who have ended their relationship with the company. Since most insurance companies have data such as names and addresses, policy history and telephone numbers of those policyholders who have terminated their

relationships with the company, it is only a matter of organizing this data. In addition, it may be worthwhile to collect data on customers who ask for quotes and do not buy policies from the company.

Once data on defectors are compiled, next step is to act on them. Telemarketing can sometimes help to retain some of the customers who have defected. Another purpose of calling these customers is to get insight into the reasons for their defections. Feedback from these customers is much more relevant as their responses are more specific and concrete. In addition, such a feedback helps a company to identify uncompetitive policies and identify attributes which make some policies more attractive than others. Customer feedbacks also can help a company to identify investments that will be profitable. According to the United States Office of Consumer Affairs, an average business never hears from 96 percent of its unhappy customers, 9 in 10 unhappy customers will not buy again and an unhappy customer will tell nine other people about his problem and 1 in 6 will discuss the problem with more than 20 people. This does not, however, mean that a company should go out of its ways to reduce defections. For example, it may not be worthwhile to write health policies to a company which changes its insurer frequently. The data gleaned from defection analysis can help a company to identify customers who stick around for a longer period of time. Advertising and marketing can be easily targeted to this group of people. An insurance company can pay a higher commission to a broker who has lower customer defection rates.

▷ Gap Analysis

Careful studies of service delivery, customer expectations and managers' beliefs indicate that there are five major elements that are important for service quality. In order of importance, these five elements are found to be reliability (ability to render promised service dependably and accurately), assurance (the employees' knowledge and courtesy), tangibles (physical appearance of policies), empathy (ability to show concern) and responsiveness (ability to provide prompt service). Using these criteria, a 26-item questionnaire called SERVQUAL has been developed to help assess customer perceptions of service quality. The responses from SERVQUAL can help a company to identify dimensions of quality that customers want and position services accordingly, rate competitors on various quality dimensions and select service strategies that can be used to differentiate services from those of the competitors.

▷ Customer Surveys

Customer surveys include satisfaction surveys, customer focus groups, complaint analysis, billing adjustments performed, telephone calls, mail surveys and so on.

6. Organizing for Quality

Every quality program to be successful needs a champion. In addition, a quality director is necessary to handle day-to-day responsibilities. The CEO should establish quality goals. The quality director should act as an adviser, identify problems and develop solutions. Every one in the company should be involved and held responsible to carry out the goals. Flatter companies and

Examples of Service Quality Dimensions and Attributes at Metropolitan Life	
Dimension	Attribute
Reliability	Send notices at scheduled times with correct name, address, premium amount, and date due.
Responsiveness	Pay claims within five days of receipt and return customer calls within the same working day.
Tangibles	Use modern computers and locate offices at convenient locations.
Assurance	Ensure customers that personal data is kept confidential.
Empathy	Send readable letters without jargon

See Falzon(1988)

horizontal cooperation among departments can be a powerful incentive to improve product quality. Barriers among departments can be reduced through the concept of internal customer. For example, at USAA Life, every employee has a customer, even if the customer is internal. Employees show the same respect for internal customers they have for external customers resulting in dramatic improvement in company morale.

Quality improvement team is another excellent way to solve problems. In 1960's, the Japanese developed the concept of quality circles (QC). A QC is a group of employees who regularly meet to discuss and come up with solution to the problems in their immediate work area. One of the major reasons for inadequate success of quality circles in the US is omission of statistics in the analysis of data. Without data analysis, it is difficult to develop effective solutions to problems. Quality circles must be

initiated by employees rather than by management. If quality circles are initiated by management, then employees may feel that they are the cause of the problem. Quality circles work well when the problems are due to poor procedures. They are likely to be not effective when systems, functions or organizations are the major cause of the problem.

Even though there are several ways to implement TQM, there are basically two different approaches. One is the radical approach which requires companies to scrap existing habits and business methods and virtually start over. Other is the incremental approach in which a company builds up quality gradually. The radical approaches have been used by companies which are in dire shape. Use of consultants, use of pilot of programs and linking quality efforts to bottomline are some of the strategies for successful radical approach. A recent international study indicate that radical approaches may waste time and money on the wrong things. Therefore, different techniques should be adopted at different stages of TQM to reap maximum benefits. Incremental approaches involve a variety of strategies. Some stress product quality first and employee motivation second.

Four in five insurance companies have tried some type of quality program during the last three years. However, very few companies have been able to reap benefits from these programs. Most have failed to achieve any appreciable benefits such as improved customer satisfaction or superior workplaces. Several reasons can be cited for these unfortunate outcomes. First, quality programs are typically implemented as if they are "program of the month".

They have short-term perspective, no follow up and no efforts are made to measure progress. In addition, departments with direct customer contact are not involved. In order to overcome this type of failure, a number of other companies have gone for total company approach by redesigning the whole organization, implementing internal customer concepts and revamping the way a company operates. This approach consumes a lot of time and money. In addition, this approach focuses on strategies rather than tactics. Since the focus is on the whole company rather than the critical areas, this approach spreads resources thinly and consequently does not show any appreciable improvements. Some companies have tried to focus on efforts to retain customers. However, they have missed strategic investments in technology so important for improved underwriting and efficient operations. To improve quality, a company must focus on what and how. No wonder that the CEO of Metropolitan states that "quality is more a journey than a destination." Quality programs should concentrate on measures of product quality which has impact on bottomline and customer retention. Company should focus on customers rather than on internal efficiency. Superior technology by itself will not lead to customer satisfaction. Misapplication of technology have lead to impersonal organizations. According to an ad by CIGNA, it decided to do away with recorded messages in customer service areas as customers preferred talking with people rather than computers. Portfolio management techniques have lead to abandoning less profitable businesses rather than improving them. In addition, capital investments are primarily focused on reducing labor costs

rather than providing better service to customers. The role of the chief executive officer is crucial for the success of quality program. Several companies make its employees and customers feel that their president supports their program. However, in practice that is not enough. He should not only lead but also demonstrate his commitment to quality. Reward and recognition are critical. Managing quality is similar to gardening. As Johnson of Connecticut Savings Bank aptly states that "all you have to do is turn your head for even a moment and the weeds are back". Therefore, constant follow-up is essential to make any quality program successful.

7. Measuring Quality

A customer will evaluate a service using a variety of measures. Waiting time, delivery time, accuracy and completeness are some of the quantitative measures of service. A customer will also be influenced by qualitative measures such as credibility, accessibility, security, responsiveness, courtesy, comfort and so on. Quality in manufacturing is typically measured in terms of extent of imperfections such as fraction defectives and error rates. This quality measure can be expressed as the number of deficiencies / number of units produced. In service, quality must be measured in terms of product features and customer satisfaction. For example, Federal Express measures quality using the service quality indicator (SQI). SQI consists of twelve classes of service performance weighed on a scale of one to ten. These weights are determined by the importance a customer places on a service feature. For example, missed pickups and damaged packages are frowned upon by the customer and consequently have high weights.

These indicators are expressed in absolute values rather than percentages as percentages can hide extent of errors as volume increases. These indicators are used to set performance goals for each individual employee and to determine incentives. Productivity loss, past-due delivery, late mailing and customer service errors are some of the other measures of service quality.

8. Implementing Quality

There are several ways to implement quality programs. Juran suggests following steps for implementation of quality programs by top management:

Organize a quality council,

Participate in the quality council,

Institute quality policies,

Set quality objectives and goals,

Establish objectives for subordinates,

Train employees in problem-oriented skills,

Take part in the quality improvement teams,

Review progress,

Encourage improvements,

Recognize achievements,

and Improve reward system.

Other approaches include defining quality, developing a corporate philosophy, determining goals, managing service points, measuring effectiveness, using TQM as a competitive technique, and accomplishing customer satisfaction.

9. Concluding Note

In order for TQM to be successful, a company should have good

information and management accounting system. Since direct labor costs are falling and overhead costs are rising, accurate allocation of costs is critical to evaluate viability of different services. Evaluation of costs using activity based accounting system can significantly improve accuracy. In addition, TQM implementation should be evaluated for its impact on bottomline. For instance, even though Wallace Company, a family-run distributor of pipes and valves won prestigious Baldrige award, it was forced into Chapter 11 early last year. In short, TQM can significantly improve profits and customer satisfaction, however, only if implemented properly.

10. To Probe Further

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