

# Impact of Total Quality Management on Customer Satisfaction

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**Abstract:** Customer satisfaction is one of the major concern today. Especially in the automobile industry. While analysing the issue, the economists believe that the customers are unsatisfied due to the total quality management (TQM) failure. This paper investigated the impact of Total Quality Management on customer satisfaction of automobile industry for sustainable development in the companies. In all the Research findings in connection with customer satisfaction and total quality management is always controversy. In this article it is focused on the impact of total quality management on customer satisfaction in automobile industry of India.

**Keywords:** Total quality management, Customer satisfaction, Aftersales service, Service quality, Servqual.

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## I. INTRODUCTION

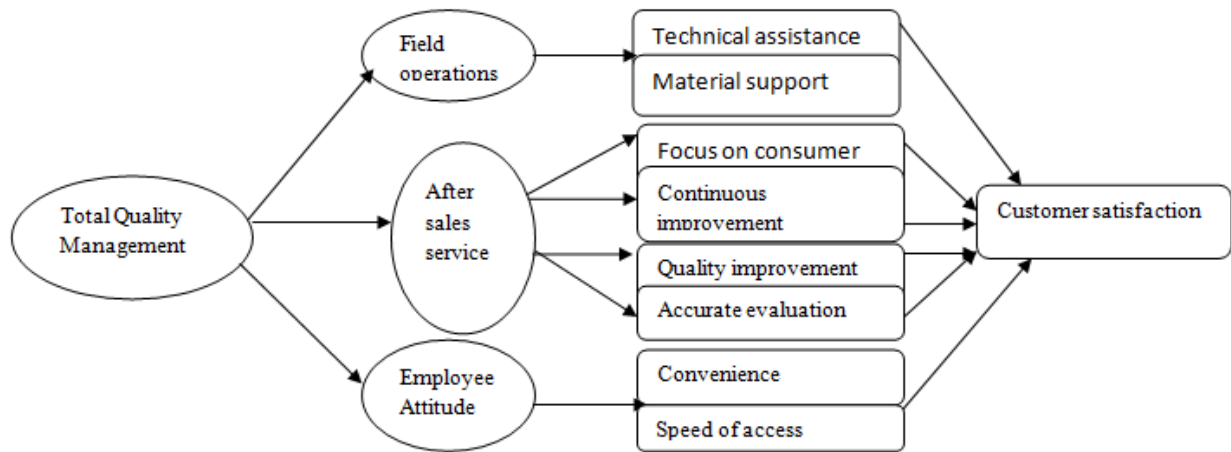
Customer is the king in the market. Every organization aims to earn profit through customer satisfaction. After sales service plays an important role in customer satisfaction and customer retention. It generates loyal customers. Customers start believing in the brand and get associated with the organization for a longer duration. They speak better about the organization and its products. TQM is a management approach of an organization focused on quality, based on the participation of all its members and aiming at long term success through customer satisfaction and benefits to all members of the organization and society. The post purchase behaviour of a consumer should depend on after sales service also. TQM functions on the premise that the quality of the products and processes is the responsibility of everyone who is involved with the creation or consumption of the products or services offered by the organization. In other words, TQM capitalizes on the involvement of management, workforce, suppliers, and even customers, in order to meet or exceed customer expectations.

TQM is an approach to improving the competitiveness, effectiveness and flexibility of an organization for the benefit of customer satisfaction. Excellent service affects the retention of existing customers and inducement of new customers. As a result, it brings high customer retention and satisfaction that helps them for sustainable development of the company. In a context of global competition and decreasing profits from product sales, the after-sales services and activities constitute a relevant profit source as well as a key differentiator for manufacturing companies and resellers. Profit generated by after-sales services is often higher than the one obtained with sales, the service market can be four or five times larger than the market for products and it may generate at least three times the turnover of the original purchase during a given product's life-cycle. Thus, the main objective of this study is to understand whether total quality management have an impact on customer overall satisfaction and preferences towards buying the products.

Every person who wishes to buy a car certainly looks up on the quality of after sales service they provide. Prime objective of every business is to earn profit through customer satisfaction. While choosing a dealer for consulting to buy a car, everyone may enquire about the satisfaction level of existing customers. The customer preferences towards a dealer will be based on this customer satisfaction. This may be closely related to the TQM of the firm delivers to its customers. At present most of the automobile companies are not fully aware about the impact of TQM and after sales service on customer preferences while buying the car by a consumer. The aim of this study is to find out the impact of TQM and after sales services on customer preferences towards choosing distributors.

**Research Objectives:**

1. To examine the impact of TQM on customer satisfaction
2. To determine the impact of after sales services on customer satisfaction.
3. To determine the favourable factors for customer satisfaction.



**Fig 1: Conceptual model of TQM**

**2. LITERATURE REVIEW**

**Theoretical Framework:**

**Total Quality Management:**

TQM can be defined as the management of initiatives and procedures that are aimed at achieving the delivery of quality products and services. Total Quality Management (TQM) is an approach that seeks to improve quality and performance which will meet or exceed customer expectations. This can be achieved by integrating all quality-related functions and processes throughout the company. TQM looks at the overall quality measures used by a company including managing quality design and development, quality control and maintenance, quality improvement, and quality assurance. TQM takes into account all quality measures taken at all levels and involving all company employees.

Total quality management has evolved from the quality assurance methods that were first developed around the time of the First World War. The war effort led to large scale manufacturing efforts that often produced poor quality. To help correct this, quality inspectors were introduced on the production line to ensure that the level of failures due to quality was minimized. TQM is universal in concept and approach. Simply, the word “total” conveys the idea that every organization member in every functional unit and level throughout the organization accepts and pursues quality. The word “quality” connotes excellence in every aspect of the organization and covers quality of products, quality of production processes and system, quality of personnel, service delivery, customer satisfaction and cost effectiveness. The word “management” refers to the pursuit of quality results through a quality management process.

**Service Quality:**

Quality improvement and adherence to accept norms of quality are central to the modern concept of marketing of services. The quality of service delivery results in customer satisfaction and their retention as it reinforces the perception that the value of the service received is greater than the price paid for it. Some important concepts are modern quality concepts results in better profitability. Which is the main goal of all the business quality controls has much to do with changing the frame of mind and psychology of the service provider and particularly the front end and back end employees actually providing the service.

Service quality is a concept that has aroused considerable interest and debate in the research literature because of the difficulties in both defining it and measuring it with no overall consensus emerging on either. Research has shown that high Service quality contributes significantly to profitability. Service quality is about ensuring customers, both internal

and external, get what they want. Customer satisfaction is the feeling or attitude of a customer towards a product or service after it has been used. Satisfaction and service quality are often treated together as functions of customer's perceptions and expectations. Customer satisfaction is determined by defining customer perceptions of quality, expectations, and preferences.

***Customer Satisfaction:***

Customer satisfaction is a term frequently used in marketing. It is a measure of how products and services supplied by a company meet or surpass customer expectation. Customer satisfaction is defined as "the number of customers, or percentage of total customers, whose reported experience with a firm, its products, or its services (ratings) exceeds specified satisfaction goals." In a survey of nearly 200 senior marketing managers, 71 percent responded that they found a customer satisfaction metric very useful in managing and monitoring their businesses.

Within organizations, customer satisfaction ratings can have powerful effects. They focus employees on the importance of fulfilling customers' expectations. Furthermore, when these ratings dip, they warn of problems that can affect sales and profitability.... These metrics quantify an important dynamic. When a brand has loyal customers, it gains positive word-of-mouth marketing, which is both free and highly effective." Therefore, it is essential for businesses to effectively manage customer satisfaction. To be able do this, firms need reliable and representative measures of satisfaction.

***Servqual:***

The SERVQUAL service quality model was developed by a group of American authors, 'Parsu' Parasuraman, Valarie Zeithaml and Len Berry. It highlights the main components of high quality service. The SERVQUAL authors originally identified ten elements of service quality, but in later work, these were collapsed into five factors - reliability, assurance, tangibles, empathy and responsiveness - that create the acronym RATER.

Businesses using SERVQUAL to measure and manage service quality deploy a questionnaire that measures both the customer expectations of service quality in terms of these five dimensions, and their perceptions of the service they receive. When customer expectations are greater than their perceptions of received delivery, service quality is deemed low.

***Automobile Industry in India:***

The Automobile industry in India is one of the largest in the world and one of the fastest growing globally. India manufactures over 17.5 million vehicles (including 2 wheeled and 4 wheeled) and exports about 2.33 million every year. It is the world's second largest manufacturer of motorcycles, with annual sales exceeding 8.5 million in 2009. India's passenger car and commercial vehicle manufacturing industry is the seventh largest in the world, with an annual production of more than 3.7 million units in 2010. According to recent reports, India is set to overtake Brazil to become the sixth largest passenger vehicle producer in the world, growing 16-18 per cent to sell around three million units in the course of 2011-12. In 2009, India emerged as Asia's fourth largest exporter of passenger cars, behind Japan, South Korea, and Thailand.

### **3. RESEARCH METHODOLOGY**

***Research Design:***

Descriptive research design was used for the study. A descriptive research design seeks to determine the bond that exists between variables, that is, to identify how one variable affects the other: it also seeks to provide a clarification to the cause or effects of one or more variables.

***Target Population:***

Target population is the units of whatever nature that a researcher intends to study. A population element is therefore the subject on which the measurement is being taken. The population refers to the group of people or study subject who are similar in one or more ways and which forms the subject of the study. The study targeted 80 respondents drawn from the different customers of automobile industry in India.

***Sources of Data:***

Secondary data were collected from company records and web sites and also from journals, books and periodicals etc and the primary data were compiled from customers of automobile industry through a questionnaire.

#### 4. DATA FINDINGS AND DISCUSSIONS

##### Perception about Following Dimensions:

Table 4.1: Perception of respondents about services

Serial no	Services	Very good	Good	Average	Bad	Very Bad	Total
1	Service Quality	13	22	28	15	2	80
2	Service Charge	10	20	26	18	6	80
3	Service Time	16	24	32	8	0	80
4	Customer relationship	22	24	31	2	1	80
5	Purchase experience	28	32	20	0	0	80
6	Before providing service	17	22	30	6	5	80
7	After providing service	22	24	28	4	2	80
8	Physical facilities and infrastructure	22	36	18	4	0	80
9	Technology and machines used	26	29	17	5	3	80
10	Working days convenience	13	20	32	13	2	80

The above table shows the different services provided by automobile companies to the customers and their opinion about each of them. Majority of the customers say that the service quality, service charge, service time, customer relationship, purchase experience, technology, working day convenience etc are all, rated average or above average. Only a small number of the respondents rated it as bad or very bad

##### Ranking The Services Based On Customer Satisfaction:

Table 4.2: Ranking of Services

RANKS	INFORMATION IN TIME		QUICK ISSUES OF REIMBURSEMENT		PROMISING DELIVERY SECURITY		CLAIM & SETTLEMENT PROCEDURE		GOOD RELATIONSHIP WITH CUSTOMERS	
	N	%	N	%	N	%	N	%	N	%
FIRST	35	43.75	14	17.5	22	27.5	10	12.5	44	55
SECOND	26	32.5	39	48.75	30	37.5	14	17.5	26	32.5
THIRD	16	20	24	30	27	33.75	38	47.5	9	11.25
FOURTH	3	3.75	3	3.75	1	1.25	10	12.5	1	1.25
FIFTH	0	0	0	0	0	0	8	10	0	0
TOTAL	80	100	80	100	80	100	80	100	80	100

From the above table shows the Ranking of different services provided by automobile companies to the customers. The majority of the customers ranks GOOD RELATIONSHIP WITH THE CUSTOMERS as the first and the second comes the INFORMATION IN TIME. Next comes the QUICK ISSUES REIMBURSEMENT and the Fourth PROMISING DELIVERING SECURITY. Last comes the CLAIM AND SETTLEMENT PROCEDURE.

##### Servqual:

TABLE 4.3: Expected scores of different dimensions in service quality

Services	Very good	Good	Average	Poor	Very Poor	TOTAL	Mean
Information In time	90	144	66	8	0	308	3.85
Quick issues of re –imbursement	45	112	96	22	0	275	3.44
Service time	60	104	111	10	0	285	3.56
Delivery security	110	136	51	14	0	311	3.89

Working Days convenience	85	156	60	8	0	309	<b>3.86</b>
Good relationship with customers	80	84	87	28	0	279	<b>3.49</b>
Physical Facilities & Infrastructure	100	88	114	0	0	302	<b>3.78</b>
Technology & machines used	75	116	84	16	0	291	<b>3.64</b>
Claim & settlement procedure	45	72	84	32	9	242	<b>3.03</b>

The majority of the customers ranks Delivery security, Information in time and work days convenience as the first, second and third. Next comes the QUICK ISSUES REIMBURSEMENT and the Fourth PROMISING DELIVERING SECURITY. Last comes the CLAIM AND SETTLEMENT PROCEDURE etc

**TABLE 4.4: Perceived and actual scores of different dimensions of service quality**

Services	Very good	Good	Average	Bad	Very Bad	Total	Mean
Information In time	175	104	48	6	0	333	<b>4.16</b>
Quick issues of re –imbursement	70	156	72	6	0	304	<b>3.80</b>
Service time	80	96	96	16	0	288	<b>3.60</b>
Delivery security	110	120	81	2	0	313	<b>3.91</b>
Working Days convenience	65	80	96	26	2	269	<b>3.36</b>
Good relationship with customers	220	104	27	2	0	353	<b>4.41</b>
Physical Facilities & Infrastructure	110	144	54	8	0	316	<b>3.95</b>
Technology & machines used	130	116	51	10	3	310	<b>3.88</b>
Claim & settlement procedure	50	56	114	20	8	248	3.10

**TABLE 4.5: Gap in each dimension and un-weighted average servqual score**

Dimension	Statement	Expectation Score	Perception Score	Gap Score	Average for Dimension
<b>1. Tangible</b>	Physical facilities & Infrastructure	3.78	3.95	0.17	<b>0.41</b>
	Technology & Machine Used	3.64	3.88	0.24	
<b>2. Reliability</b>	Issue Reimbursement	3.44	3.80	0.36	<b>0.40</b>
	Service Time	3.56	3.60	0.04	
<b>3. Responsiveness</b>	Information In time	3.85	4.16	0.31	<b>0.31</b>
<b>4. Assurance</b>	Delivery security	3.89	3.91	0.02	<b>0.09</b>
	Claim & Settlement	3.03	3.10	0.07	
<b>5. Empathy</b>	Customer Relationship	3.49	4.41	.92	<b>0.39</b>
	Working day	3.89	3.36	-0.53	
<b>Un-weighted Average SERVQUAL score</b>					<b>1.6</b>

**TABLE 4.6: Perception about Service Dimensions**

1. The appearance of the automobile companies physical facilities, equipment, personnel and communication materials.	<b>12</b>
2. The automobile companies ability to perform the promised service dependably and accurately	<b>28</b>
3. The automobile companies willingness to help customers and provide prompt service.	<b>29</b>
4. The knowledge and courtesy of the automobile companies employees and their ability to convey trust and confidence.	<b>15</b>
5. The caring and individual attention that the automobile companies provides to its customers.	<b>16</b>
<b>Total</b>	<b>100</b>

**TABLE 4.7: Weighted servqual score**

SERVQUAL Dimension	Score from Table 4.5	Weighting from Table 4.6	Weighted Score
<b>Tangibility</b>	<b>0.41</b>	<b>12</b>	<b>4.92</b>
<b>Reliability</b>	<b>0.40</b>	<b>28</b>	<b>11.2</b>
<b>Responsiveness</b>	<b>0.31</b>	<b>29</b>	<b>8.99</b>
<b>Assurance</b>	<b>0.09</b>	<b>15</b>	<b>1.35</b>
<b>Empathy</b>	<b>0.39</b>	<b>16</b>	<b>6.24</b>
<b>Average Weighted score:</b>			<b>32.70</b>

From the above graph it is inferred that the entire gap in servqual model is good because all those gaps are positive except working day convenience. It means that actual satisfaction is greater than the expected satisfaction. In the case of working day convenience it is showing a negative value, this gap implies that the expected satisfaction is below the perceived or actual satisfaction.

## 5. CONCLUSION AND SUGGESTIONS

### *Summary:*

From the data obtained, the data analysis and interpretations has been conducted. A total of 80 customers responses have been received and their responses to the various aspects relating to the TQM have been interpreted. The pattern of their responses to an extent shows some parity. Some of the customers were not ready to respond. Otherwise a hassle free study has been conducted. The data obtained have been analysed with different statistical methods and their overall results have been obtained and presented.

### *Findings:*

The study is related to TQM services provided to customers by different automobile companies and 80 respondents were interviewed with the help of the questionnaire on the basis of the data analysis the following findings have been drawn.

- The service quality increases as the effect of TQM increases.
- Increase in quality leads to increase in customer satisfaction
- TQM activities should be improved in the automobile industry.
- Employees are not much trained regarding the TQM services
- Respondents are somewhat satisfied with the TQM services provided by automobile companies.
- The SERVQUAL shows that TANGIBILITY dimension has the average score/gap of 0.41, the statements in this dimension include ‘physical facilities and infrastructure, technology & machine used’. It implies that these dimensions meet the expectation of the respondents. The weighted score of tangibility is 4.92.
- The SERVQUAL shows that RELIABILITY dimension has the average score/gap of 0.41, the statements in this dimension include ‘issue reimbursement & service time’. It implies that these dimensions meet the expectation of the respondents. The weighted score of reliability is 11.2
- The SERVQUAL shows that RESPONSIVENESS dimension has the average score/gap of 0.31; the statements in this dimension include ‘information in time’. It implies that this dimension meet the expectation of the respondents. The weighted score of responsiveness is 8.99.
- The SERVQUAL shows that ASSURANCE dimension has the average score/gap of 0.09, the statements in this dimension include ‘delivery security and claim & settlement’. It implies that these dimensions meet the expectation of the respondents. The weighted score of assurance is 1.35.



- The SERVQUAL shows that EMPATHY dimension has the average score/gap of 0.39, the statements in this dimension include ‘customer relationship & working day convenience’. It implies that customer relationship is meet the expectation and the working day convenience is not meet the expectation of the respondent. The weighted score of empathy is 6.24
- The main attribute that determine the service quality is customer relationship
- The customers encourages the TQM activities in all time during their vehicle services.

#### **Suggestions:**

- In order to gain more satisfied customers, they should acquire more skilled personnel or provide better training for the existing employees.
- Feedback collection system should be improved.
- Organize programs to educate the customers how to keep the vehicle properly.
- Provide service in holydays to customers
- Make customers delightful and provide individual attention to each customer and understand their needs and wants.
- Provide better technical service in the first time so that automobile companies can reduce repeated complaints from customer.
- Provide better TQM services to the customers
- As the TQM activities are better, then the overall performance also becomes far better.

#### **Conclusion:**

TQM is based on consumer’s perception on the outcome of the service and their evaluation of the process by which the service has been performed.. It is the extent to which a service meets or exceeds customer needs and expectations. The main purpose of the study is to gain a better understanding of the relationship between TQM and customer satisfaction.

The level of satisfied customers is the key to business success. TQM is one of the factors that have direct relation with satisfaction of customers. Companies are able to catch up with the customer needs in time and deliver quality service to them. They are able to make their customers satisfied. In order to possess that ability for a long time they have to look up on customer relationship and create a good communication system to interact with customers.

The companies can benefit from the fact of knowing how customers perceive the service quality and knowing the way of how to measure service quality. From this study it is concluded that most of the companies provides a wide range of TQM services while the employees are not much aware of the TQM activities. So it is necessary to train the employees more regarding the TQM services, and the customers are satisfied only to some extent on the TQM activities. So by providing better TQM activities it is possible to increase the overall performance of the organization.

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