CHAPTER 2

NATURE AND SCOPE OF THE STUDY

This Chapter covers the context of the study as also the research methodology, objectives, sample, data analysis methods and so on.

2.1 Introduction

India's performance on global quality scales is poor. The World Competitiveness Report 1995 (Business Today 1 1995) prepared by The World Economic Forum ranked India 44th out of 48 countries on the price-quality ratio. Further, India received a rating of 3.87 on an 11-point scale from 0 to 10, '0' on the scale indicates inferior to foreign competition, and '10' indicates being superior to foreign competition. On customer orientation as well, India ranked 43rd, receiving a rating of 3.81 on an 11 point scale. (See Figure 2.1 below)

FIGURE 2.1 CUSTOMER ORIENTATION

Customer Satisfaction is low on the Priority List of Corporate India

<table>
<thead>
<tr>
<th>Country</th>
<th>Score From 0 - 10</th>
<th>Rank Among 48 Countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sweden</td>
<td>7.36</td>
<td>1</td>
</tr>
<tr>
<td>Japan</td>
<td>7.00</td>
<td>2</td>
</tr>
<tr>
<td>USA</td>
<td>6.98</td>
<td>3</td>
</tr>
<tr>
<td>UK</td>
<td>5.62</td>
<td>22</td>
</tr>
<tr>
<td>MALAYSIA</td>
<td>5.50</td>
<td>25</td>
</tr>
<tr>
<td>THAILAND</td>
<td>4.87</td>
<td>29</td>
</tr>
<tr>
<td>CHINA</td>
<td>4.80</td>
<td>33</td>
</tr>
<tr>
<td>INDONESIA</td>
<td>4.49</td>
<td>36</td>
</tr>
<tr>
<td>MEXICO</td>
<td>3.86</td>
<td>42</td>
</tr>
<tr>
<td>INDIA</td>
<td>3.81</td>
<td>43</td>
</tr>
</tbody>
</table>


14
According to Skaria2 1995, global automobile manufacturers reject one component out of every 10,000. In India, one out of every 100 is trashed. He estimates that out of the country's Rs. 1,20,000 crore of industrial production in 1993-94, a staggering Rs. 6,000 crores or 5% of the country's products were defective. He added that more rejects meant that consumers compensated companies for defective goods by paying higher prices. Little wonder that Indian products and services were judged poorly on the price-quality equation.

Poor quality has been the result of 48 years of protectionism. India has thus become vulnerable to the onslaught of foreign competition from goods and services, manufactured and marketed, using world quality standards and systems. Indian companies will find it extremely difficult to move from being a producer of shoddy goods and services to producing quality.

Nothing short of a quality revolution can save Indian industry from becoming extinct. It is not only state-of-the art technology that is required to produce, but also an understanding of customers, and what they need. The most invincible barrier to cross will be the attitude which needs to undergo change. Deeply ingrained in the Indian psyche is the attitude "Chalta Hai" (anything will do) which keeps us from becoming world class.

Quality gurus caution companies that quality is not conformance to internal quality standards, but to the parameters set by the customers. Unless and until companies are able to ensure that
every product or service they design, manufacture, market and
deliver meet customer specifications, they will not be
successful. Therefore putting listening to customers at the
heart of the quality process becomes extremely necessary.
(Skaria2, 1995)

There are Indian companies which have formal systems for
listening to the customers, and which are also implementing
quality systems religiously. However, India needs a quality
revolution if it is to improve on product performance and
service delivery across the board.

A nationwide poll covering 100 chief executive officers of Indian
companies (Vishwanathan 3, 1994) reported that 79% of these
CEOs rate customer satisfaction amongst the three most critical
strategic initiatives of the year. 36% identified it as the
no. 1 priority. Yet, to understand the customer needs they seem
excessively dependent on complaint analysis (73%), and
performance review (74%). They appear to use less of market
research (27%), and customers satisfaction measures (42%),
which are proactive measures. The article also cites cases of
several companies: Hindustan Lever, Cadbury, Maruti, Citibank,
ANZ Grindlays, ITC Hotel etc. which are using different methods
to understand customers. CEOs in a separate poll (B.T. IMRB 4,
1995) believe that quality is an important issue and rate
Indian quality in the range of 4 to 7 on a 10 point scale,
with Indian products receiving a mean score of 5.
The present study was conceptualised to arrive at a status report on how Indian services perform on service quality. Customer perceptions on mass services like hotel, bank and so on, were collected for the study. There has been no formal study of these service sectors because major services in India have been regulated by the Government. It was only in 1991 that the Indian Government began the process of liberalisation, freeing Indian industry from the shackles of a licensing era. The Government dominated service sectors have also begun to feel the impact of liberalisation.

The findings of the present study it is hoped will go a long way in contributing to an understanding of what consumers of mass services expect. The study urges service companies to adopt an external focus which incorporates the consumers view rather than an internal one, which is both myopic and restrictive. Companies which choose to ignore the consumer can do so at their own peril.

2.2 Objectives of the Study

The study was designed to gain a better understanding of service quality in the Indian context from a consumer perspective. Nine mass consumer services were covered. They include Domestic Air, Hotel, Restaurant, Mail, Road Transport, Bank, Diagnostic Centre, Insurance, and Hospital.

The broad objectives include:

1. Measurement of service quality of Indian Mass Consumer Services as a whole on each of the service dimensions
Tangibles, Reliability, Responsiveness, Assurance, and Empathy.

Service quality is defined as a gap between what is expected by the consumer and what he perceives he receives from the service.

2. How users of Indian mass consumer services relatively rate the importance of five service dimensions that underlie any service.

3. Understanding if there are differences in service quality for each of the five service dimensions within a service sector under study. In addition, understanding if there are differences between pairs of service dimensions on importance ratings for each service sector under study.

4. Understanding if for each service dimension on weighted service quality and importance ratings, there are differences across service sectors.

5. Understanding if there are differences in weighted service quality for each of the five service dimensions by age, income, education, and sex for Indian mass consumer services as a whole.

2.3 Hypotheses

Several hypotheses were generated for further testing. Appropriate statistical tests were carried out to test the hypotheses.

Hypothesis on service quality for mass consumer services as a whole.
Hypothesis 1.

For Indian mass consumer services as a whole, there is a significantly negative difference between what consumers perceive (P) they receive, and what they expect (E), they should get on a service, for each of the five service dimensions namely, Tangibles, Assurance, Reliability, Responsiveness and Empathy. In other words, Indian mass consumers perceive service quality, which is defined as the difference between P and E, to be negative i.e. it falls short of customer expectations.

Hypothesis on importance ratings for Indian mass consumer services as a whole.

Hypothesis 2

There are significant differences on importance ratings between each pair of the five service dimensions for Indian mass consumer services as a whole.

A consumer of mass services attaches varying importance to the five service dimensions that underlie any service. Each respondent is asked to allocate points out of a hundred to each service dimension. The total for each respondent across all service dimensions should be hundred.

Hypotheses on importance ratings for Indian mass consumer services sectorwise.
Hypothesis 3.
There are significant differences between each pair of the service dimensions on importance ratings for each service sector.

The hypotheses were tested for all nine service sectors. Hypothesis 3 was broken down into several sub-hypotheses for each sector. They are numbered from 3.1 to 3.9.

Hypotheses for differences between Perceived and Expected for each service dimensions sectorwise.

Hypothesis 4.
There are significant differences between P and E, for each of the five service dimensions within each service sector. This was formulated to find out to what extent Indian consumers perceive that service quality is being delivered by each service sector.

Hypotheses for comparisons of importance ratings between pairs of services for each service dimension.

Hypothesis 5.
There are significant differences on mean importance ratings for each service dimension compared for different pairs of services. This was meant to find out to what extent consumers of different services attach varying importance to each of the service dimensions, i.e. which service sectors received significantly higher or lower ratings. Hypothesis 5 is made up of five sub-hypotheses numbering from 5.1 to 5.5.

Hypotheses for weighted service quality on each service dimension compared servicewise.
Hypothesis 6.
There would be significant difference in mean weighted service quality on each service dimension compared service sectorwise. Hypothesis 6.1 to 6.5 were formulated to test if for any service sector, weighted service quality for a service dimension was more negative than the other sectors.

Hypotheses for weighted service quality on variables like age, income, education and sex.

Hypothesis 7.
Overall mean weighted service quality for each service dimension for Indian mass consumer services as a whole varies considerably with age, and income, i.e. mean weighted service quality is perceived to be more negative with higher age, or income. Also overall service quality for Indian mass consumer services as a whole varies with sex or education i.e. service quality is negative for those with higher education and varying sex. A set of hypotheses numbering 7.1.1 to 7.5.4 were formulated to test Hypothesis 7.

2.4 Research Methodology
The study was envisaged in two parts:

= Literature review on service quality and related areas.
= Survey of consumers of mass services in India.

Literature review involved scanning journals, research reports and books for articles on service quality. The process took almost a year because only material related to the research
Besides scanning management journals, literature pertaining to each service had to be obtained from trade journals, books and magazines that dealt with the services under study. These were difficult to obtain since Pune has only a few sector specific libraries like banking, insurance and road transport. As far as possible the researcher tried to get access to survey results of studies undertaken recently. The researcher took great pains to identify survey results concerning customer service or service quality. These the researcher felt would prove useful in helping to correlate the present study findings to sector specific survey results obtained through to the literature survey. However, the researcher could not do justice on relating the findings since the variables in each study were measured differently. The researcher used the survey results to draw some broad conclusions which service providers will find informative and applicable in their respective contexts.

A survey of consumers of mass services in India was conceptualised to get a feel of service quality and what it meant to the Indian consumer. The survey attempts to understand what customers expect from different mass consumer services, how they evaluate each of the services, and what they perceive they are receiving from the services. More details on the survey are reported in the subsection on Hypothesis, Sample, Research Instrument, Variables measured etc. in this Chapter.
Managers and executives from the companies in Pune who had experience of using the services as consumers were contacted for the study. In addition, managers and executives attending management development programmes at the Tata Management Training Centre were requested to participate in the study. They were all asked to answer the questionnaire from a consumer perspective. Respondents were briefed in groups about how they should complete the questionnaire. Each was asked to complete the questionnaire for one service only for which they had a recent experience. Of over 500 questionnaires administered to consumers of mass services only 348 responses could be used for analysis.

Since the study was undertaken with no financial sponsorship a convenience sampling had to be used.

Profile of Respondents from the Sample

Respondents belong to different age groups from below 30 years to above 60 years. However, bulk of the respondents are in the age group of 30-49 years. The income spread of the respondents is from below Rs. 36,000 p.a. to above Rs. 1,56,000 p.a. Most of the respondents earned over Rs. 60,000 p.a. In terms of education, 317 respondents were either graduates or above. Many of the respondents were males. It was found that 301 out of 333 respondents, whose sex was indicated in the questionnaire were males. The sample size by age, income, education and sex is given below.
### TABLE 2.1

**Sample by Age**

<table>
<thead>
<tr>
<th>Age in Years</th>
<th>Sample Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 60 yrs.</td>
<td>19</td>
</tr>
<tr>
<td>50 - 60 yrs.</td>
<td>28</td>
</tr>
<tr>
<td>40 - 50 yrs.</td>
<td>87</td>
</tr>
<tr>
<td>30 - 40 yrs.</td>
<td>145</td>
</tr>
<tr>
<td>&lt; 30 yrs.</td>
<td>54</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>333</strong></td>
</tr>
</tbody>
</table>

### TABLE 2.2

**Sample by Income**

<table>
<thead>
<tr>
<th>Income (in Rs.)</th>
<th>Sample Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; Rs. 1,58,000</td>
<td>25</td>
</tr>
<tr>
<td>Rs. 1,32,000 - 1,58,000</td>
<td>28</td>
</tr>
<tr>
<td>Rs. 1,08,000 - 1,32,000</td>
<td>73</td>
</tr>
<tr>
<td>Rs. 84,000 - 1,08,000</td>
<td>81</td>
</tr>
<tr>
<td>Rs. 60,000 - 84,000</td>
<td>70</td>
</tr>
<tr>
<td>Rs. 36,000 - 60,000</td>
<td>43</td>
</tr>
<tr>
<td>&lt; Rs. 36,000</td>
<td>13</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>331</strong></td>
</tr>
</tbody>
</table>
### TABLE 2.3

**Sample by Sex**

<table>
<thead>
<tr>
<th>Sex</th>
<th>Sample Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>301</td>
</tr>
<tr>
<td>Female</td>
<td>32</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>333</strong></td>
</tr>
</tbody>
</table>

### TABLE 2.4

**Sample by Education**

<table>
<thead>
<tr>
<th>Education</th>
<th>Sample Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graduate</td>
<td>166</td>
</tr>
<tr>
<td>Post-Graduate</td>
<td>130</td>
</tr>
<tr>
<td>Doctorate</td>
<td>21</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>317</strong></td>
</tr>
</tbody>
</table>

Sample profile of service sectors

For the purpose of the study, a sample of nine major Indian mass consumer services were identified. These services were already experiencing the initial effects of liberalisation and increased competition from new players. The 9 sectors identified for the study and the sample sizes of respondents in each is given in Table 2.5 below:
Table 2.5
Sample by Service Sector

<table>
<thead>
<tr>
<th>Service Sectors</th>
<th>Sample Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Air (Only includes domestic air)</td>
<td>42</td>
</tr>
<tr>
<td>2. Road Transport (includes intercity travel by bus)</td>
<td>32</td>
</tr>
<tr>
<td>3. Diagnostic Centre</td>
<td>19</td>
</tr>
<tr>
<td>4. Hospital</td>
<td>46</td>
</tr>
<tr>
<td>5. Hotel</td>
<td>49</td>
</tr>
<tr>
<td>6. Restaurant</td>
<td>61</td>
</tr>
<tr>
<td>7. Bank</td>
<td>38</td>
</tr>
<tr>
<td>8. Insurance</td>
<td>32</td>
</tr>
<tr>
<td>9. Mail</td>
<td>29</td>
</tr>
</tbody>
</table>

Total: 348

2.6 Data Analysis Methods

Different statistical tests were used for hypothesis testing

1. Differences about means - matched pairs for dependence tests.
   This was used to find out if the differences on importance ratings between each pair of the service dimensions were significant for a specific service sector. For the purpose of this test each respondent's raw scores on importance ratings for a service dimension is matched with importance rating of the other service dimension. The differences for the pairs of the service dimensions is aggregated across all respondents. This is necessary since each respondent's scores on importance ratings for the service dimensions are interdependent.
2. Correlation Analysis

Correlation analysis was used to test whether overall mean weighted service quality scores of respondents vary by age or income.

3. Chi-square

Chi-square was computed to test if overall service quality scores were differing significantly by sex or education.

4. Difference between two population means: independent samples.

Differences between population means was used to test the significance of the differences on importance rating across independent samples of service respondents from different service sectors. Also mean weighted service quality across independent samples of respondents from different service sectors was analysed using differences between population means.

2.7 Research Instrument

The research instrument used was a structured questionnaire SERVQUAL (Parasuraman, Zeithaml and Berry 5, 1986). It consists of 26 statements presented in two parts. One set of statements captures what the customer expects of a service and the other part captures what he/she perceives is getting on a 5 point scale from 1 to 5, 1 indicates strongly disagree and 5 indicates strongly agree.

The questionnaire is designed to elicit information on the gaps between what the customer perceives they receive and what they expect. SERVQUAL has another question to capture how a customer assigns importance weights to five service dimensions
The respondent is asked to distribute 100 points over the 5 service dimensions according to the importance they assign to each. The higher points indicating more weight to the service dimension. The expectations and perceptions statements on the 26 items of the questionnaire revolve around the five service dimensions.

The items in SERVQUAL corresponding to each service dimension are as follows:

<table>
<thead>
<tr>
<th>Service dimension</th>
<th>Item No. SERVQUAL Questionnaire</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tangibles</td>
<td>1, 6, 7, 19</td>
</tr>
<tr>
<td>Reliability</td>
<td>8, 11, 13, 18, 23</td>
</tr>
<tr>
<td>Responsiveness</td>
<td>5, 9, 12, 24</td>
</tr>
<tr>
<td>Assurance</td>
<td>2, 3, 15, 20, 21, 22, 26</td>
</tr>
<tr>
<td>Empathy</td>
<td>4, 10, 14, 16, 17, 25</td>
</tr>
</tbody>
</table>

The SERVQUAL questionnaire also elicited information on the respondent with respect to age, income, education, and sex.

Each questionnaire that a respondent filled was with respect to only one of the nine consumer services identified for the study. The respondents were requested to complete the questionnaire for any one of the services for which they had a recent experience of not more than a year old. Prior to completing the questionnaire respondents were briefed on how to go about it.

For the purpose of the analysis 348 questionnaires were included. It must be mentioned that all 348 had completed the 26-item
questionnaire capturing their perceptions and expectations of a service. However, they did not complete the part on importance ratings. Only 323 questionnaires were completely filled with respect to the 26-item questionnaire and relative importance ratings. Similarly some of the respondents did not specify their age, income etc. Therefore for the analysis sample size varied for each of the variables of age, income etc. Analysis was therefore performed according to the sample size.

2.8 Measurement of Variables

The different variables measured in the study are:

1. Service Quality:

Service Quality is the difference between consumer ratings assigned to each pair of the perceptions and expectations statements. These are summed up for all statements on a service dimension to get the service quality score for each consumer on that dimension.

Since service quality is the difference between perceptions (P) and expectations (E), service quality can be either 0 or 1, or greater than 1, or less than 1. If it is 0 or 1, or greater than 1, service quality is delivered to the customer. If it is less than 1, service quality is not delivered to the consumer and we say that service quality has fallen short of consumer expectations.

2. Mean Service Quality:

It is the difference between P and E for each statement added up for each dimension and divided by the number of statements to
get a consumer's average service quality score. These average service quality scores summed up and divided by number of consumers gives the mean service quality score for a service dimension.

3. Mean Weighted Service Quality
It is the average P - E score for each respondent on a service dimension score multiplied by the importance rating assigned to the service dimension summed up across all respondents and divided by the number of respondents.

4. Mean Importance Rating :
Mean importance rating is the importance ratings on the service dimension summed up for all respondents divided by the number of respondents.

5. Overall Service Quality :
It is the average service quality for all service sectors put together for a specific service dimension.

6. Overall Mean Weighted Service Quality :
Is the average of mean weighted service quality for all sectors on a specific dimension.

2.9 Presentation of the Analysis

The analysis is presented in subsequent chapters as follows :
* Aggregate picture - for services as a whole.
  - Overall service quality for each service dimension
  - Overall importance rating for each service dimension
importance ratings - within each service sector.

Importance ratings for each pair of service dimensions compared within a service sector.

- Service quality - within each service sector.
Service quality for each pair of service dimension is compared within a service sector.

- Weighted service quality across service sectors.
Weighted service quality for each service dimension is compared across different services.

- Importance ratings across service sectors.
Importance rating for each service dimension is compared across different service sectors.

- Weighted service quality on age, income, education and sex.
Weighted service quality for overall services on each service dimension were compared by age, income, education and sex.

The analysis answers several questions:

1. How do Indian mass service consumers assess service quality?
2. How do Indian mass service consumers decide on the weights assigned to each of the five service dimensions, i.e. which of them is more important?
3. Do Indian mass service consumers assess service quality based on their age, income, education and sex?
4. Do Indian mass consumers consider certain service dimensions more important than the others? Does this vary with the services, or are there certain services which are similar in the importance ratings assigned to the service dimensions?
5. Do Indian mass consumers of services perceive that some services deliver service quality?

6. How do Indian mass consumers in their composite measure of service quality i.e. weighted service quality, reflect their satisfaction or dissatisfaction with the services?

7. Do Indian mass consumers in assigning importance weights to a service dimensions differ significantly by the service, i.e. do they give higher or lower weightages to certain service dimensions?

The hypotheses are tested and the findings emerging from these are presented from chapters 5 to 10.

References:


