CHAPTER 7

“Incorporation of Benchmarking in Manufacturing System”

Benchmarking is the process of identifying best practices in an industry and thereby setting goals to emulate them to the organization. Benchmarking is defined as a search for the best industry practices that, when put into effect, will lead to superior products, processes and services. Benchmarking is a continuous structured process that leads to superior performance and a competitive advantage. The scope is to set challenging and attainable goals to become the best of the best. Analyzing, investigating and incorporating best industry practices lead to profitable returns.

7.1 INTRODUCTION

Benchmarking is an ever-increasing management prerequisite for implementing meaningful positive changes in an organization. Benchmarking has proved to be an effective tool for achieving business objectives. Since no one has time or resources to reinvent solutions, organizations benchmark for new ideas, new insights and best practices to give them the competitive edge. For organization to create their own successful future, they must learn from their environment - from the best and brightest competitors, markets, products and processes in their industry. Benchmarking has been done in the past under the name competitive analysis. Benchmarking has been around since the early 1980's and is widely practiced across USA, and has been rapidly growing in Europe, Australia and Asia. In India, although Benchmarking has been widely talked about, only few firms have successfully implemented it.

7.2 DEFINING BENCHMARKING

1. American productivity quality center (APQC) defines benchmarking as “the process of identifying, understanding and adapting outstanding practices and processes from organizations anywhere in the world to help your organization to improve its performance”.

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2. Robert C. Camp defines benchmarking as the continuous process of measuring the products, services and practices against the toughest competitors or those companies recognized as the industry leaders.

3. According to professor Malcom Rimmor of Deakin University, benchmarking is "intelligent copying to improve business"

7.3 CLASSIFICATION OF BENCHMARKING

Benchmarking studies may be classified either in terms of partners (i.e. against whom to benchmark) or in terms of subject (i.e. what is to be benchmarked).

7.4 BASED ON PARTNERS

1. Internal Benchmarking

It is comparison between units within one organization. It enables organizations to obtain immediate gains by identifying their best internal practices and transferring those to other parts of the organization. However, the potential for the real performance breakthroughs is rather small, as you seek information within your own, already well known environment.

2. Competitive Benchmarking

It implies comparison with your competitors. The objective is to compare companies in the same market that have competing products or services eg., Coca-Cola Vs Pepsi, Bajaj Vs. Hero Honda. The advantage of competitive benchmarking is that you can see what your related performance is.

3. Generic Benchmarking

Benchmarking a process in one or several organizations, which are in unrelated business, is called generic benchmarking. This type of benchmarking focuses on excellent work processes rather than on the business practices of a particular organization or industry. Some business functions are the same regardless of dissimilarities of the industries. It has potential of revealing the best of best practices.

7.5 BASED ON SUBJECT

1. Performance Benchmarking
It is very much comparing performance levels against "the best". The focus can be on the whole company or parts of it. Performance benchmarking requires the least resource support because it relies on the analysis of data from database searches and surveys that can be conducted by an experienced librarian or a market research professional.

2. Strategic Benchmarking

In strategic benchmarking, the focus goes beyond the performance leadership and it is more about comparing strategic, corporate decisions. This can be an important information to the companies own strategic planning. Strategic benchmarking has become increasingly popular because it requires only a limited investment and a small professional team.

3. Process Benchmarking

It means seeking the best practices through face to face studies and observation of key business processes regardless of who the best practice candidate may be. Process benchmarking requires the participation of subject experts, the owner of a process and process work team.

7.6 BENCHMARKING PROCESS STEPS

Benchmarking is done in four phases and these four phases are divided into ten process steps to obtain good results. The four phases of benchmarking process are:

1. **Planning**: Identify what is to be benchmarked, Identify comparative candidates, Determine data collection method and collect data,
2. **Analysis**: Determine the current performance gap, Project future performance levels,
3. **Integration**: Communicate benchmark findings and gain acceptance, Establish functional goals,
4. **Action**: Develop action plans, Implement specific actions and monitor progress and Recalibrate benchmark

7.7 OBJECTIVES OF FOUR PHASES

1. **Planning** - The objective of this phase is to prepare a plan for selecting factors for comparing, method of data collection and identifying the
competitors for benchmarking

2. **Analysis** - The phase will assist companies to understand competitors strengths and to assess their performance against these strengths.

3. **Integration** - The objective of this phase is to use the data gathered to define the goals necessary to gain or maintain superiority and to incorporate these goals into company’s formal planning processes.

4. **Action** - During this stage the strategies and action plans established through the benchmarking process are implemented and periodically assessed (Recalibrated), with reports of company’s progress in achieving them.

### 7.8 TYPE OF INFORMATION

A wide range of comparative information can be collected ranging from simple quantitative headcount and cost data to qualitative assessments of leadership philosophies and practices. Between these two extremes, information on outputs and productivity ratios, customer satisfaction, quality levels, organizational arrangements, operating practices, and other comparative characteristics can be gathered. A List of factors are given by “The Benchmarking Exchange (TBE)”, a net work of engineers and professional for effective benchmarking.

### 7.9 A CASE STUDY OF COMPETITIVE BENCHMARKING

In automobile industry two wheelers market has more share than three wheelers and four wheelers. In India two wheelers are widely used than four wheelers, so in this case two wheelers are considered. The two wheelers can be classified into five segments. They are: Geared Scooters, Un-g geared Scooters, Motorcycles, Mopeds and Others.

Table below shows the changes in preference of customers over nine years. The share of the motorcycle segment had increased rapidly though relatively small modern un-g geared scooters are doing well and traditional scooters had lost its market share to motorcycles.
Table 7.1 Market share of various segments in two wheelers industry

<table>
<thead>
<tr>
<th>Year Ended 31 March</th>
<th>2 Wheelers (Unit sold)</th>
<th>Geared Scooters (%)</th>
<th>Un-gear Scooters (%)</th>
<th>Motor Cycles (%)</th>
<th>Mopeds (%)</th>
<th>Others (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>1,763,210</td>
<td>43.3</td>
<td>7.9</td>
<td>21.6</td>
<td>17.6</td>
<td>9.6</td>
</tr>
<tr>
<td>2004</td>
<td>2,208,231</td>
<td>42.6</td>
<td>8.6</td>
<td>23.9</td>
<td>15.1</td>
<td>9.8</td>
</tr>
<tr>
<td>2005</td>
<td>2,660,005</td>
<td>40.6</td>
<td>9.1</td>
<td>24.8</td>
<td>16.8</td>
<td>8.7</td>
</tr>
<tr>
<td>2006</td>
<td>2,965,474</td>
<td>38.4</td>
<td>8.9</td>
<td>27.1</td>
<td>16.5</td>
<td>9.1</td>
</tr>
<tr>
<td>2007</td>
<td>3,042,347</td>
<td>35.4</td>
<td>8.8</td>
<td>30.0</td>
<td>15.5</td>
<td>10.3</td>
</tr>
<tr>
<td>2008</td>
<td>3,403,471</td>
<td>32.7</td>
<td>8.3</td>
<td>34.6</td>
<td>14.6</td>
<td>9.8</td>
</tr>
<tr>
<td>2009</td>
<td>3,776,719</td>
<td>25.9</td>
<td>10.0</td>
<td>42.7</td>
<td>14.1</td>
<td>7.3</td>
</tr>
<tr>
<td>2010</td>
<td>3,745,516</td>
<td>16.0</td>
<td>10.9</td>
<td>54.1</td>
<td>12.9</td>
<td>6.1</td>
</tr>
<tr>
<td>2011</td>
<td>4,318,531</td>
<td>12.3</td>
<td>9.5</td>
<td>66.2</td>
<td>8.7</td>
<td>3.3</td>
</tr>
</tbody>
</table>

FIGURE 7.1 Market Share of Scooters and Motorcycles in two wheelers
Table 7.3   Market Share of various brands of motorcycles

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Hero Honda</td>
<td>47.2</td>
<td>50.6</td>
<td>49.8</td>
</tr>
<tr>
<td>2. Bajaj</td>
<td>15.8</td>
<td>20.7</td>
<td>22.9</td>
</tr>
<tr>
<td>3. Others</td>
<td>37.0</td>
<td>28.7</td>
<td>27.3</td>
</tr>
</tbody>
</table>

**Phase-I Planning**

From the market study Hero Honda and Bajaj are in first and second position respectively. So Hero Honda and Bajaj are identified as comparative organizations and Bajaj is Benchmarked with Hero Honda. A few factors which are relevant and critical are identified and considered to Benchmark against toughest competitors in motorcycle segment.

**BAJAJ**

The motorcycle models in Bajaj are Boxer AT, Boxer CT, Boxer AR, Caliber, Caliber Croma, Pulsar 150 CC, Pulsar 180 CC and Eliminator. The price of these models range from Rs. 30,000/- to Rs. 85,000/-. The engine capacity ranges from 100 CC to 180 CC. They all have two years of warranty except Boxer AT which has one year warranty. Bajaj has three plants and it manufactures motorcycles in Waluja plant in Aurangabad. They have dealership network throughout the country and in Andhra Pradesh they have 25 dealers and service centers. They provide finance to the vehicles through its countrywide network ‘Bajaj Auto Finance Ltd. (BAFL)’. They have no brand ambassadors for advertising the products. They have distribution network over 60 countries worldwide.

**HERO HONDA**

The motorcycle models in Hero Honda are CD 100, CD 100 SS, Joy, Splendor, Passion, CBZ, Dawn, and Ambition. The price of these models range from Rs. 37,000/- to Rs. 55,000/-. The engine capacity ranges from 97 CC to 156 CC. They all have two years of
warranty. Hero Honda has two plants and it manufactures motorcycles in Dharuhera and Gurgoan. They have dealership network throughout the country and in Andhra Pradesh they have 28 dealers and service centers. They have a tie up with ICICI and other big financial institutions to provide easy finance to its customers. They have brand ambassadors for advertising the products. They have distribution network over 31 countries worldwide. The financial results of Bajaj Auto Ltd. are: Total income-4402, Total expenditure-3698, Cross Profit-704, Tax-183 and Net profit-521 and that of Hero Honda are: Total income- 4539, Total expenditure-3845, Cross Profit-694, Tax-231 and Net profit-463 in crores of rupees for the year 2001-02. The share holdings for Bajaj Auto Ltd.: Indian promoters-29, Foreign promoters-0, Investors-35, Public-32 and others-4 and that of Hero Honda: Indian promoters-26, Foreign promoters-26, Investors-29, Public-17 and others-2. The resale value is collected for various models of Bajaj and Hero Honda from second hand shops. For the year 2001, the resale value of Bajaj products; Boxer-AT-79.4%, Boxer-CT-82.3% and Caliber-75.5% of the original price and for Hero Honda products; Splendor-85.1%, CBZ-74.8% and Passion-87.9% of the original price.

**Market Performance**
The sale of motorcycles of Bajaj and Hero Honda and their percentage share in motorcycle segment is given below:

**Table 7.4 Market Performance**

<table>
<thead>
<tr>
<th>Financial Year</th>
<th>Bajaj (Units)</th>
<th>% Share of Bajaj in Motorcycles</th>
<th>Hero Honda Sales (Units)</th>
<th>% Share of Hero Honda in Motorcycles</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004-2005</td>
<td>89,675</td>
<td>13.5</td>
<td>2,30,194</td>
<td>4.8</td>
</tr>
<tr>
<td>2005-2006</td>
<td>1,29,263</td>
<td>16.1</td>
<td>2,68,945</td>
<td>33.52</td>
</tr>
<tr>
<td>2006-2007</td>
<td>1,36,017</td>
<td>14.8</td>
<td>4,07,563</td>
<td>44.5</td>
</tr>
<tr>
<td>2007-2008</td>
<td>2,00,183</td>
<td>17.0</td>
<td>5,30,600</td>
<td>45.0</td>
</tr>
<tr>
<td>2008-2009</td>
<td>2,55,176</td>
<td>15.8</td>
<td>7,61,700</td>
<td>47.2</td>
</tr>
<tr>
<td>2009-2010</td>
<td>4,22,016</td>
<td>20.7</td>
<td>10,29,555</td>
<td>50.63</td>
</tr>
<tr>
<td>2010-2011</td>
<td>6,56,018</td>
<td>22.9</td>
<td>14,25,195</td>
<td>49.8</td>
</tr>
</tbody>
</table>
Phase-II: Analysis

Hero Honda is joint venture of Hero cycles of India and Honda Company of Japan. Honda Motors has good technology and Hero group has largest distribution network in India. So their venture has become a great success and became world no. 1 Two-wheeler Company. Bajaj has a good brand equity, had a good distribution network but still, not been able to do much in the last few years. The share of geared scooters had fallen and it has become a major loss for Bajaj, which has more market share in geared scooters. The reason for the downfall of the company has been its inability to identify the demand trend. The resale value of Hero Honda motorcycles is high compared to Bajaj. Hero Honda gives 6 free services to all its bikes. Hero Honda has excellent marketing techniques compared to Bajaj. Though financial results of both the companies are almost same, the results of the Hero Honda are only on motorcycles, whereas results of Bajaj are on all segments.

Phase-III: Integration

The following goals may be projected for Bajaj Auto:

Enlarging the dealership network, introduction of right products at right time in the market, use of brand ambassadors for advertising, sponsorship to major sports events and tournaments, manufacture of environmental friendly bikes, production of reliable and quality products, assessment of market trends properly, provide more free service to bikes, and make suitable model to knock the Hero Honda Splendor.

Phase-IV: Action

To compete with the Hero Honda or overcome it, the following actions can be taken. Bajaj by reducing franchise amount for dealers can increase dealership network to interior and small towns so as to increase the sales. As a part of the advertisement strategy, Bajaj must sponsor major sports events and tournaments to enhance the sales. Brand ambassador’s concept can also be used, as it became a popular advertising strategy for marketing. Market is interested in environmental friendly bikes. Bajaj, by product research and development, must maintain the emission levels as low as possible and manufacture environmental friendly bikes. Some of the Bajaj models are expensive. Cost must be reduced by value engineering methods and more of economy class should be
manufactured. From the past data, it is clear that Bajaj did not gauge the market properly. They focused on scooters when market was clearly shifting to motorcycles and they focused on two stroke bikes when market was interested in four stroke bikes. So Bajaj must keep track on product market, market trend and change ahead of its competitors.

7.10 CONCLUSION

Benchmarking has been looked upon as merely a method for comparing and evaluating performance among organizations. Benchmarking can be used in more active way for Benchmarking has been looked upon as merely a method for comparing and evaluating problem solving and attacking different challenges by learning from other organizations. So, benchmarking has become a method for learning and problem solving as well as tool for evaluation.