CHAPTER - 4

BENCHMARKING IN MANUFACTURING SECTOR

4.1. INTRODUCTION AND OVERVIEW OF THE CHAPTER

The chapter includes a brief update about the manufacturing industry scenario in India, keeping quality aspects in the forefront, followed by few examples where benchmarking has been successfully employed in the Indian manufacturing sector. The manufacturing sector was selected as a suitable environment because strong competitive pressure has forced many manufacturing organisations to embrace benchmarking concepts.

A survey was conducted by Zhao et.al. (1995) to benchmark quality practices in India, China and Mexico. The survey reveals that majority of the manufacturers in these countries are aware of the quality-management concepts and philosophies. This survey also identifies that Mexican companies are doing better than Indian and Chinese counterparts in terms of quality performance, quality improvement efforts and application of ISO 9000. As reported by Chan and Quazi (2002), amongst select Asian countries, South Korea has the highest number of ISO certified companies followed by Singapore and India takes the third position. Given this scenario, it is observed that adoption of benchmarking concepts in the Indian manufacturing industry is slow since the industries which have embraced ISO 9000 and TQM concepts, outnumber the industries which have used benchmarking as a quality improvement methodology. In this chapter, the adaptability of benchmarking in the manufacturing sector is explored as an investigative study, by conducting two levels of surveys in certain manufacturing organisations in Mysore and Bangalore regions. Further, no benchmarking exercise was carried out in any particular organisation.

4.2. MANUFACTURING SECTOR IN INDIA – AN UPDATE

As reported by Goswami (2003), the Indian economy has witnessed a fairly steady growth through the last decade, however the Indian Manufacturing Sector, a key component of the economy has not contributed significantly to this growth.

According to Kundu et.al, (1998), the organized manufacturing sector comprises 0.8 per cent of a total of 14,618,623 firms in India. The remaining constitutes the unorganized
sector as classified by the National Sample Survey (i.e., the directory firms, non-directory firms and the own account firms). This organised sector employs 19.1 per cent of industrial workers in the country and contributes to 74.6% of gross value added in the economy. Out of the 8 trillion dollars of world trade, more than 70 per cent is in the area of processed manufactures and India's share in this is less than 1 per cent. The World Economic Forum (WEF) Global Competitiveness Report ranked India 37th and 49th (out of 59 countries surveyed) in terms of current and growth competitiveness, respectively. This significantly points to the fact that it is necessary for the manufacturing sector in India to develop a strategy to be globally competitive. This low ranking is attributable to the poor operational performance of manufacturing companies in India, coupled with intensified competition in the wake of globalisation and inadequate policy-making by the government.

As stated by Chandra et.al. (2002) in the survey report on Competitiveness of Indian Manufacturing - Findings of the year 2001, quality remains as the number one competitive priority of Indian firms. Figure 4.1., shows the relative importance given to four sets of issues by Indian firms over the two surveys (1997 and 2001). The priority for Quality and Structural Changes (which includes ability to change product mix, fast delivery capabilities and low price capabilities), has gone up since 1997.

![Figure 4.1. Competitive Priorities of Firms: Group Averages](image)

Figure 4.1. Competitive Priorities of Firms: Group Averages
This is good news and indicates that the industry is recognizing the importance of bringing about basic changes in manufacturing systems, processes and practices. The priority for invention and R&D has gone down since 1997. This of course, is not good news. This has implications for long term competitiveness since manufacturing needs to be backed up by new product introduction and new processes to sustain itself both domestically and in exports. Same is true for operations related changes.

The same survey identifies the variety of improvement programmes aimed at enhancing the productivity and effectiveness in Manufacturing firms. Table 4.1 gives a comparison of changes in emphasis on various manufacturing programmes. It lists the top ten initiatives that Indian managers have adopted during 2000-2002 and compares them with a list of top ten programmes that they plan to implement during 2002-2004. Past initiatives have focused on training of workers, supervisors and managers. Perhaps that has prepared these organizations for bringing about different kinds of changes that they want to implement in their firms in the future. Moreover, absence of common information network across the firm has also led to sub-optimal decision-making.

Table 4.1: Changes in Emphasis: Top Ten Manufacturing Initiatives of the Past and the Future

<table>
<thead>
<tr>
<th>Initiatives in the Past</th>
<th>Initiatives in the Future</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Continuous Improvement of Current Manufacturing Practices</td>
<td>1. Integrating Information Systems across Functions within Business Units</td>
</tr>
<tr>
<td>5. Worker Training</td>
<td>5. Integrating Information Systems within Manufacturing</td>
</tr>
<tr>
<td>6. ISO 9000</td>
<td>6. <strong>Benchmarking</strong></td>
</tr>
<tr>
<td>7. Improving Manufacturing Processes to protect the Environment</td>
<td>7. Supervisor Training</td>
</tr>
<tr>
<td>10. Integrating Information Systems across Functions within Business Units</td>
<td>10. Improving the quality of Work life</td>
</tr>
</tbody>
</table>

As regards the items in future initiatives, it appears that firms would like to integrate information systems with manufacturing in the future – this could mean:

- Integrating machines on a computer network so that data streams can be monitored automatically for real time control.
• Making planning and scheduling decisions through computer based decision support.
• A system to collate information for making reports.

It can be noted from the table that **Benchmarking** is one initiative listed among the future initiatives. The report suggests that the Indian manufacturing industry must gear up to a more streamlined, performance oriented and customer responsive style of management. There must be an enhanced emphasis on quality and a closer look at the needs of the customer.

### 4.2.1. Quality aspects in the Indian manufacturing sector

According to Gupta (2000), the process of liberalisation of the Indian economy has opened up imports from various countries. Indian manufacturers' ability to compete in the domestic market will largely depend on their ability to compete with the imports from foreign countries. One of the tests will be the ‘quality’ of goods produced by the domestic manufacturers. Indian manufacturers have just begun to realize that quality will play a greater role in the future growth or even survival of their business. In fact, this may be the factor that could decide the fate of this country in the twenty-first century.

As stated by Priyadarshi (2002), globalisation, liberalisation and privatisation have implications for quality management in India. Export-oriented units and Multi National Companies (MNCs) have strived to blend India’s competitive edge (large and skilled manpower, easy access to credit, low exchange rate premium, strong IT training and management schools among others) with quality management tools and techniques. From the quality perspective, ISO 9000 (the international quality benchmark) certified companies provide a more focussed analysis and insight into the quality management practices of organisations competing and intending to compete internationally. An exploratory study conducted by Mallak *et al.* (1997) found that quality improvement programs in ISO 9000 organisations seek to achieve and maintain product quality, assure management that quality standards are being achieved, and provide consistent products to consumers. Findings of this study suggest that ISO 9000 certification efforts are supported by such values as team orientation, group training, defect prevention and attention to detail.

As reported in the webpage (http://www.autopartsasia.com/Month_featapril_s.asp), in India, there are about 400 companies in the organised sector registered with Automotive Component Manufacturers Association (ACMA), 129 have an ISO 9000 certification and
about 39 have the QS 9000 certification. But, industry experts reckon that it is important that this certification leads to more efficient manufacturing systems and better use of assets.

Amidst the slow growth of quality consciousness in the manufacturing sector, some Indian component manufacturers have been accredited international recognition for their best practices. It is worthwhile to mention the case of M/s. Sundaram Fasteners Limited (SFL). This organisation in South India was among the first to get the quality certification and to implement total quality management (TQM) and Total Preventive Maintenance (TPM). SFL produces a range of 6,000 fasteners with an installed capacity of 39,000 tonnes per annum, reckoned to be twice the capacity of its closest competitor. This company diversified its operations and slowly started exporting radiator caps to General Motors and finally became sole supplier. General Motors chose this company among 30,000 vendors as “Best Supplier of the Year”, for four consecutive years till 1999. Further, another flagship company of the Sundaram Group, M/s. Sundaram-Clayton has won acclaim and international recognition for setting global quality standards. Sundaram-Clayton, the manufacturer of air-brake systems and castings has emerged as Asia's -- first-ever winner of the Deming Prize for Overseas Companies in the year 1998. TVS Motor Company of the same group in 2002 bagged the Deming prize, a coveted international award for quality management.

4.2.2. Examples of Benchmarking in Manufacturing Sector

After almost one and half decades since the concept of benchmarking was popularised in the west, the technique is being slowly implemented in many Public Sector Units (PSUs) in India which include Bharat Heavy Electricals Limited (BHEL), Bharat Earth Movers Limited (BEML), Steel Authority of India Limited (SAIL) to name a few.

Coming to the private sector, the literature informs a few cases of implementation of this tool. It is worthwhile to name them at this stage. The multi-crore engineering and project management company, Larsen and Toubro has benchmarked against global players like: M/s. Bechtel Corporation, one of the world's largest engineering-construction firms and M/s Fluor Daniel, one of the world's largest, publicly owned engineering, procurement, construction, and maintenance services organizations. The benchmarking activity with the help of M/s Mckinsey was carried out to boost the skill levels of its human resources.
Literature also informs the application of benchmarking to particular business functions in organisations. Specific to the Manufacturing systems, M/s Escorts Limited has conducted benchmarking activity. In the area of warehousing, M/s Puralotor Filters have done benchmarking and M/s Crompton Greaves have done benchmarking in the distribution system front.

The RPG group in India benchmarks functions like purchase management, demand forecasting, value engineering, market research, logistics management, inventory management. In the bearings industry segment, both the market leaders M/s. SKF Bearings (India) - India's leading bearings manufacturing and engineering services company and M/s. FAG Bearings (India) have reaped results after benchmarking. In the case of M/s. SKF Bearings, the Board of Directors of SKF Bearings India Limited, took on record the Audited Annual Accounts of the Company for the financial year 2002. Benchmarking initiatives adopted by the company for the year 2002 have contributed to a net profit of Rs. 204.2 million, an increase of 127.6 percent over the corresponding period last year. The Continuous Improvement Process (CIP) programme launched in M/s. FAG Bearings (India) gathered momentum after the company adopted internal benchmarking within the FAG group and raised the performance in many areas. Several teams worked on different workshops to achieve new milestones.

In the textile Industry segment, textile giant Aravind Mills regularly benchmarks its technology and compensation functions against coveted employers like M/s. Proctor and Gamble, and M/s. Hindustan Lever Limited.

Another successful application of benchmarking is seen in the case of an automotive battery manufacturer in South India, selling batteries in the name of ‘Amara Raja’. The organisation Amara Raja Batteries Ltd (ARBL) is a joint venture between the Galla family (a proprietorship concern) and Johnson Controls Inc of the USA. It went on stream in the year 1992. ARBL closed fiscal 2001 with a turnover of Rs 155 crore, up from the Rs 101 crore it clocked in 1997, on an equity base of 11.38 crore. The net profit of the company was Rs 20.53 crore during the year, by benchmarking itself against global standards aiming to emerge the best quality, least cost producer of Valve-Regulated Lead Acid (VRLA) batteries. The company has started implementing best practices in almost all the stages of production.
by benchmarking internally against Johnson Controls with an aim of mastering the art in every stage of production and trying ways to reducing cost.

The auto ancillary – maker, Gabriel India, benchmarked its customer delivery times with the UK-based British Filters, which manufactured automotive filters. While British Filters delivered its product globally within 24 hours, the Indian company took upto 30 days within the country. This difference allowed Gabriel to set itself a target of 24 hours and work on it.

These examples show that the manufacturing industries have achieved wonderful results through benchmarking technique.

4.3. THE FIRST LEVEL OF SURVEY CONDUCTED IN BANGALORE AND MYSORE REGIONS

A questionnaire was designed to assess benchmarking concept familiarity. Survey respondents were General Managers, project managers and manager’s in charge of quality function in the organization. The questionnaire was mailed to 77 diverse organizations that were accredited by M/s. BVQI which included manufacturers of machine tools, special purpose machinery, automobiles, automotive components, foundries, manufacturers of electric components, stationery, forge shops, fasteners, valves, extruders, power looms, etc..

It was also noticed that 25 identified organisations were located outside Karnataka state, 52 organisations were located in Bangalore and Mysore regions and in particular 18 organisations were in and around Mysore City.

The responses were received from 14 organisations yielding a response rate of 18.18%. However, it was observed that none of the 25 organisations outside Bangalore and Mysore regions responded to the questionnaire. Responses from the 14 organisations among the 52 organisations mailed within the local regions yielded a response rate of 26.9 %. 3 questionnaires were partially completed, thus reducing the response rate to 21.1%. These responses were closely analysed as the first phase of the study.

The analysis revealed only four organizations among the survey respondents are practicing this concept. The responses from each of these four organisations are highlighted in the next section. In order to maintain confidentiality, the company names are not revealed and are coded as C1, C2, C3, and C4.
a). Company: Cl

a. 1. Introduction and ISO 9000 Certification History

This company manufactures
1. Industrial Electronics and

It started operations in the Year 1980. This unit has a work force of 300 dedicated professionals and has demonstrated R&D and capability to meet the requirements of the engineering industry. [The Industrial Electronics group manufactures a wide range of Industrial electronics products like Converters, Inverters and Industrial Electronic Voltage Regulators.]

[The Factory Automation group of this organisation delivers products such as Digital Read Outs’, Machine Tool Drives and Retrofits].

The organisation was certified for ISO 9000 in the year 1993 and thereafter has completed 14 surveillance audits.

Significant improvements have taken place after implementation of ISO, in the following functional areas:
- Research and Development,
- Production,
- Sales and
- Marketing

a. 2. Benchmarking

Benchmarking practices in this company were initiated in 1994 and all the personnel in the organisation are aware of this concept.

Benchmarking practices have been adopted in the following functional areas resulting in changes ranging from minor to significant improvements.
- Product Quality
- Production
- Human Resources Management
- Housekeeping
Despite the fact that this company has four units that manufacture diverse products, it does not do internal benchmarking while it practices competitive benchmarking and also undertakes benchmarking with the best in the class. Benchmarking was formally introduced as a management initiative and key personnel were trained by an external consultant on its adoption in functional units like PCB assembly, marketing and even in supplier quality. Process non-conformances were brought down from 26,000 ppm to 9000 ppm over the last 10 years. Since the year 2000 onwards the company has improved the delivery conformance of the products from 46% to 87% and noticeably, the customer complaints have reduced from 17% to 9%.

b). Company: C2

b.1. Introduction and ISO 9000 Certification History

The parent company of this division was born in 1941 in Mumbai in India. The company is a leading manufacturer of abrasives. The coated abrasives division set up in the year 1983 at Bangalore (Karnataka) is Asia's most advanced Coated Abrasives Plant. The organisation was certified for ISO 9000 in the year 1999 only and subsequently it has undergone 2 surveillance audits. Subsequent to the implementation of ISO 9000, the company has seen substantial improvement in Production and significant improvement the following functional areas:
- Research and Development
- Sales
- Marketing
- Human Resources Management

b.2. Benchmarking

It is noticeable that this company initiated benchmarking 6 years before the implementation of ISO 9000 and benchmarking is being done in the following functional areas by adopting Internal, competitive and best in class benchmarking.
- Product Quality
- Market Research
- Maintenance
- Human Resources Management
- Production
- Housekeeping
- Safety Management

With the help of an external consultant, both ISO 9000 and Benchmarking have been channelised in this organisation. The company has benefited from these two quality initiatives. With quality programmes in place, the company has been in a position to capture 25% of the market share in India and is looking forward to make more progress.

c). Company: C3

c.1. Introduction and ISO 9000 Certification History

The company started as a trader of automobiles and parts in the year 1929. The group comprises of twelve manufacturing plants. Three plants are dedicated to the manufacture of automobile steering gears and steering linkages for different automobiles. One such plant is in Mysore City. The company has a market share of more than 75% in this product. The company was awarded ISO certification in the year 1998 and subsequently, the company has seen substantial process improvements in Research and Development function and Production. Significant improvements have happened in Sales and Marketing streams. Being an automotive parts manufacturer, this company is also a QS 9000 company.

c.2. Benchmarking

The company initiated internal benchmarking since the year 1998 across the three plants that manufacture similar product with a common agreement between these three plants. The policy within the company is that compulsorily every functional head should visit the other plants every two months once. For example, the head of Quality Assurance (QA) visits the other two plants, has discussions with the heads of the same functional unit there and identifies certain best practices in those plants. After each visit the best practices noticed by the head are immediately implemented in the other two plants. This exercise has yielded incremental process improvements continuously. This practice has been extended to other functional units like marketing, finance and human resources. The company does not call this activity as benchmarking but calls it as inter-plant comparison. External benchmarking with competitors is also done in the area of Metallurgy. The company has benchmarked with its competitors for the identification for the right material for the product build-up with the
objective of cost reduction. With the efforts of benchmarking, the company has witnessed significant improvements in the areas of research and development, production, sales and marketing. Internal benchmarking has helped this company in material cost reduction and maintain a market share of greater than 75% in India. Further, benchmarking has helped the company in the reduction in customer complaints. However, the improvement in numerical terms was not disclosed by the organisation. The organisation also claimed that there has been a substantial reduction in field failures and again actual figures in this respect were not revealed. Lastly, the company’s personnel informed that both QS 9000 and TS 16949 necessitate the process of benchmarking.

d). Company: C4

d.1. Introduction and ISO 9000 Certification History

This Austrian company is the largest and technologically most advanced circuit board manufacturer in Europe. The company currently maintains seven production plants: Four plants in Austria, the other three in Hungary, India and China. Approximately 3,200 people are employed in these plants. In January 1999, the company took over the Indian plant where multi-layer PCBs for middle and large series are produced. Since the take-over, the company has invested more than Rs. 1,000 million in the technological equipping and capacity-expansion of this plant. The company was awarded ISO certification in the year 1993 when it was still an Indian owned company. Since then, the company has undergone more the 6 surveillance audits.

The organisation has been benefited by the certification since it found significant improvements in the areas of:
- Research and Development
- Production
- Sales
- Marketing
d.2. Benchmarking

Benchmarking practices in the company were introduced in 1993 itself, specifically in the area of product quality. The company adopts the methodology of benchmarking with the best in class. The commitment from the management of the company for benchmarking is partial and no benchmarking reports have been documented as a proof of seeing results through benchmarking. The company has not hired any external consultant for initiating benchmarking activities. With the benchmarking efforts put-in, the company has seen only minor improvements in the area of production and sales. The company has been able to capture more than 50% of the market share because of these quality initiatives. In the present context, the company has shifted its focus to the use of Six-Sigma practices in all its processes and benchmarking initiatives have been sidelined since the company found that benchmarking did not yield significant improvements. The utilisation of six-sigma has proved extremely beneficial to the company in terms of return of investment (ROI) and defect reduction.

4.3.1. Conclusions from the first level of survey

The responses from the first survey revealed that benchmarking is not being done in a formalised manner. Industries were not encouraging to initiate any in-depth benchmarking study in a particular organisation. However, it was observed that certain activities that typically fall under the purview of benchmarking are being carried out. These include comparing competitors in terms of product prices, after sales service, warranty claims and field failures. Further, all the organisations which practiced benchmarking did not allow a third person or an academic researcher to see their documented benchmarking literature and also did not want to share their best practices with anybody else.

With this learning, the author proceeded to the second level of survey. In this survey, the term benchmarking was not at all used with the intention of eliciting more outright responses. Indirect quality attributes which are a part of benchmarking process like customer feedback, employees’ initiative, inputs from suppliers/vendors and observation of competitors were used in the survey instrument. The purpose was to observe whether the surveyed organisations use benchmarking in an informal sense.
4.4. THE SECOND LEVEL OF SURVEY CONDUCTED IN INDUSTRIES AROUND MYSORE CITY AND ANALYSIS OF RESULTS.

Taking help from the Confederation of Indian Industry (CII) - Mysore zone, 46 ISO certified organisations were identified to carry out the survey. Questionnaires were posted to all the identified organisations and 16 organisations responded yielding a response rate of 34.7%. From the profile of responses, the following information was generated:

All the respondent organisations had a consultant or an internal quality advisor helping them in pursuit of quality improvement and in the process of stipulation of benchmarks for their manufacturing activity. In fact, one organisation producing electronics based components stated that it hired a foreign consultant exclusively for the adoption of benchmarking practices in all its manufacturing facilities.

Further these organisations established using different criteria and these benchmarks were reviewed and modified continually. 15 out of the 16 responses tracked product quality using customer feedback based on customer complaints received over a period of time. This served as a benchmark to improve quality. A reduction in rejections/customer complaints/warranty claims over a certain block period (Example: three months) implied incremental improvement in product quality.

Seven respondents stated that improvement in product quality took place based on benchmarks stipulated by their principals or collaborators. One automotive axle-manufacturing organisation clearly pointed out that it benchmarks its foreign collaborator in all spheres of manufacturing. All the quality metrics applicable in the parent company are also evaluated in this manufacturing facility.

All the respondents have hinted that employees in the respective organisations are equally valued for their contribution. All the organisations have employee suggestion schemes, quality circles, kaizen approaches and just in time inventory management technique that help in enhancing the overall system quality using employee initiatives. These parameters act as internal benchmarks that track the process of continual quality improvement. For example, the number of kaizens implemented over a time scale is a measure of process improvement. Further, inputs from suppliers and vendors were also treated as benchmarks for improvement.
14 respondents have informed that they involve vendors/suppliers in their product quality enhancement programme.

Another important feature of benchmarking is to observe competitors. One organisation has clearly said that it collects data about their competitors using secondary sources. Another organisation observes its competitors using only its customer base. Seven organisations observe all their competitors in the market directly. Four organisations stated that they evaluate their competitors through their customers. Three respondents have highlighted that they observe competitors using only secondary sources.

One medical equipment manufacturer revealed that they evaluate their competitors in terms of the product accessories along with product quality and price. Observing competitors is the external benchmark for the companies as they strive to reduce the gap that exists between themselves and their nearest competitor, before attempting to look at the market leader.

Organisations also responded to questions regarding the immediate quality objectives (self-benchmarks) that are to be met. Most of the organisations did not specify quality metrics quantitatively and many responses were general statements.

4.4.1. Specific benchmarking metrics used by survey organisations

Four organisations did the benchmark of reducing the response time to customer complaints. One organisation dealing with manufacture of medical equipment has progressed to a target of delivering 75% of the spares in less than 48 hours of time anywhere in India. A company manufacturing PCBs’ states that the response time to any complaint is less than 48 hours of receipt of complaint. The third organisation is a two-wheeler manufacturer and this organisation has an online ‘Product Performance Feedback Report’ (PPFR) which is accessible to all the dealers in India. Any complaint by any customer brought to the notice of the dealer is acted upon within 24 hours. The other organisation that is striving towards reducing response time to customer complaints is a gearbox manufacturer. This organisation has an immediate objective of total elimination of complaints previously encountered. With this objective, the company feels that the cost of external failures has come down.

Another common benchmark carried out by three organisations is to reduce in-plant rejection. One company manufacturing Aluminum extrusions is working continually to keep
this rejection level below 1%. In the other two organisations, attempts are presently on to continuously monitor rejection at various stages of production and actions are being implemented in the monthly corrective meetings held.

A manufacturer of automotive tyres is attempting to improve the response time to customer needs by conducting a customer dissatisfaction survey.

A few of the other benchmarks that companies are working are include:

- Reduction in purchase cost of raw material
- Choosing viable alternative materials that bring cost benefits
- Career path planning for workmen

4.5. COMMENTS ABOUT THE SURVEY RESULTS

The first level of survey was conducted with the objective of identifying a target-manufacturing organisation, which is presently doing benchmarking, to enable an in-depth investigation on the benchmarking study. After the survey was done, the results of the survey showed that only four organisations practiced benchmarking and the others were not aware of this concept.

Among the four organizations that responded positively towards benchmarking, only two organizations have documented all the benchmarking reports. Benchmarking information in these four organisations has been detailed in the earlier section.

Table 4.2 summarises the benchmarking activities in the four organisations that are aware of the process.

Table 4.2:
Table showing Responses from the organisations employing benchmarking.

<table>
<thead>
<tr>
<th>SURVEY QUESTIONS ↓</th>
<th>COMPANY</th>
<th>C1</th>
<th>C2</th>
<th>C3</th>
<th>C4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Are the Personnel in the organization aware of Benchmarking practices</td>
<td></td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>2. Benchmarking practices have been initiated since</td>
<td></td>
<td>1994</td>
<td>1993</td>
<td>1993</td>
<td>1998</td>
</tr>
<tr>
<td>3. Benchmarking practices have been taking place in the following functional areas:</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>PRODUCT QUALITY</td>
<td></td>
<td>Not Done</td>
<td>✓</td>
<td>Not Done</td>
<td>Not Done</td>
</tr>
<tr>
<td>MARKET RESEARCH</td>
<td></td>
<td>&quot;</td>
<td>✓</td>
<td>&quot;</td>
<td>✓</td>
</tr>
<tr>
<td>MAINTENANCE</td>
<td></td>
<td>✓</td>
<td>&quot;</td>
<td>&quot;</td>
<td>✓</td>
</tr>
<tr>
<td>HUMAN RESOURCES</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>&quot;</td>
<td>Not Done</td>
</tr>
<tr>
<td>PRODUCTION</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>&quot;</td>
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</table>
## Table showing Responses from the organisations employing benchmarking. [Contd..]

<table>
<thead>
<tr>
<th></th>
<th>HOUSE KEEPING</th>
<th>FINANCE</th>
<th>SAFETY</th>
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<tbody>
<tr>
<td></td>
<td>Not Done</td>
<td>✓</td>
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<td>Not Done</td>
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### 4. Type of Benchmarking

<table>
<thead>
<tr>
<th></th>
<th>INTERNAL BENCHMARKING</th>
<th>COMPETITIVE BENCHMARKING</th>
<th>BENCHMARKING with BEST IN CLASS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td></td>
<td>✓</td>
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### 5. Commitment from Management for sustenance of benchmarking

<table>
<thead>
<tr>
<th></th>
<th>Substantial</th>
<th>Initial Stage</th>
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<tr>
<td></td>
<td>-</td>
<td>✓</td>
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</table>

### 6. External Consultant has been hired for conducting benchmarking Activities?

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<thead>
<tr>
<th></th>
<th>Yes</th>
<th>Yes</th>
<th>No</th>
<th>No</th>
</tr>
</thead>
</table>

|                      | All benchmarking Reports have been well documented? | Yes | Yes | No | No |

This survey revealed that 63% of the organizations were not aware of benchmarking at all. Though it may not be possible to generalise the reasons based on the sample survey conducted, it can be said that benchmarking is yet to be used for quality improvement. However some of the organisations, which do not have a formal Benchmarking programme, have expressed keen interest in initiating Benchmarking activities.

Another survey instrument was sent to 46 industries wherein the term benchmarking was not at all used but the channels through which quality improvement is taking place was assessed. The response from the industries to this survey was 34.7% which was better than the response to the first survey. All the respondent organisations stated that they continually do the process of comparison of their products with the competitors in the market in terms of product quality, product pricing, product aesthetics and product accessories. The results of this comparison are used for continual improvement. Another fact that came out of the survey was that all the organisations did not know how to formally implement a benchmarking programme. The quality personnel in the organisations were not aware of the generic benchmarking models, benchmarking code of conduct, ethics and certain conceptual foundations of benchmarking. During the course of interviews that the author had with quality managers in certain organisations, the quality personnel agreed that benchmarking is
a viable tool for product quality improvement. Further, it is more people driven than being system driven since the employee attitude toward achieving high quality in the production process itself plays a crucial role. Specific to automotive and automotive spares manufacturers, the remark from the quality managers was that QS-9000 and TS 16949 call for the process of benchmarking. Also, the quality personnel agreed that benchmarking helps an organisation to catch up with the market at a quicker rate and it is a universally applicable tool.

With all these positive features of benchmarking, the author attempted to probe why the benchmarking concept is still a low priority area among the manufacturing industries. The interviews with quality personnel in different organisations revealed that there are certain issues of benchmarking that deter from making it a viable quality improvement technique. Some of the apprehensions identified after conducting the study were:

- Benchmarking procedures and systems still appear abstract and sometimes obscure.
- Companies were not willing to share business secrets
- Cost assessment and time schedules for the implementation are not clear
- Difficulty in getting benchmark figures from competitors
- Lack of transparency in business
- No agency certifies benchmarking practices
- Resistance to change
- There is no compulsive factor for the use of benchmarking

4.6. CONCLUSION

Despite having many success stories, the concept of benchmarking is in the infant stage and is yet to gain popularity and awareness in the local context. Indian agencies like the National Productivity Council (NPC), Quality Assurance Institute of India (QAI), Confederation of Indian Industry (CII) have been initiating efforts to popularise benchmarking, in manufacturing, service and the information technology sectors.

Considering the scope of study and focus of research, only a beginning has been made to explore the corporate acceptance of benchmarking among the local manufacturing industries.
When the researcher interviewed heads of the quality function in manufacturing organisations, all of them agreed that benchmarking is necessary for an organisation’s growth. Also, every organisation does benchmarking in a way it perceives. Further, they mentioned that the awareness level of benchmarking has been restricted to the top and middle management personnel and not companywide. They also pointed that companies do not make benchmarking a unique selling proposition but do benchmarking silently. The results of the benchmarking activity would also not be made public but would be used internally. They were of the opinion that benchmarking is a top-down approach but the top-management is yet to commit completely for successful implementation of benchmarking activity.