

Bench Marking and Best Practices in Textile Industry

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Abstract-- This paper includes conceptual part of what is Bench Marking?

Why Bench Marking?

Where to do Bench Marking exercise?

When to do Bench Marking exercise?

How to do Bench Marking?

The paper includes the process of Bench Marking and Best Practices. This is the first part of the paper.

South being a textile concentrated place, this has to be analyzed the problems of textile industry and come out with suggestions to use the concept of Bench Marking to overcome the current problems in some of the textile enterprises. The concept of Bench Marking was being practiced even 25 years back. For example, the then Madura Mills when they merged with Coats plc. in the 1970s, they started adopting this Bench Marking but under a different name GBP – Group Best Practice. But this Bench Marking was an internal Bench Marking practice as they have done it only among their group mills and of course they had mills in 30 different countries and that itself was a good composition to practice Bench Marking.

This paper shares the experience of Madura Coats in Bench Marking, which was called GBP was one of the functions of Industrial Engineering in this company. Lessons have taken from Madura Coats and extend it to Textile Industry in general. For doing this, SWOT analysis for Textile Industry in South India in particular has done and the possibility of improving the current strength of textile industry to much higher levels and convert the weaknesses of textile industry into strength by using the tool of Bench Marking has explored. Some key people in the textile industry has asked to discuss suggestions.

Banking Industry can also do the same thing. In this, one should try to trace the history of Banking in India and try to make the comparison between Public Sector Banks, New Generation of Private Sector Banks and Foreign Banks. Each sector is having some good practices and the effort of the paper writer will be to come out with certain common factors on which Bench Marking can be done in Indian Banking Industry. One should analyze both the industries and should take at least one in consideration. The paper will take care of more things from the practical side rather than theoretical side. Such an analysis for the textile industry will be of interest to people in textile industry in general and Coimbatore people in particular.

Index Term-- Resource-based View, Global Logistics Strategy, Core Resource

I. INTRODUCTION

Business in general has become very competitive after the economical liberalization in 1991. This has become more

severe as far as textile industry is concerned and hence an attempt is made in this paper as to how to establish a competitive advantage through Bench Marking.

With the threat of recession still from real more and more and organizations are losing considerable amount of market share and finding it difficult to survive leave alone growth. More over with free trade, deregulation, privatization, technological advances and fierce competition from inside the country and outside, there is greater producer capacity chasing each rupee of consumers spending which puts even greater cost and competitive quality pressure on organizations.

In this turbulent and rapidly changing environment, only those organizations can become successful who have the ability to continuously challenge the status-quo and improve their products, services and business processes in an on-going manner and as part of their day-to-day operations. These are also times that provide us with great opportunities for growth and renewal. Continuous improvement is therefore, the only business strategy, which can differentiate an organization from others and keep it miles ahead of fierce competition.

Benchmarking is a potent enabler for achieving excellence at all levels through continuous improvement. This article attempts to provide overview of benchmarking and its various dimensions. Benchmarking is one of the tools under TQM. The objective of doing benchmarking is to create competitive advantage. Better performance is a key for success of any business today especially in textile industry.

Textile being an old and conservative industry employing a huge labour force, which brings 23% of the export income to the country employing about 35 million people directly and 65 million people indirectly has to stay strong in the country for the general economy of the employing about 35 million people directly and 65 million people indirectly has to stay strong in the country for the general economy of the major industry to survive and also take them to growth path.

WHAT IS BENCH MARKING AND WHERE TO DO BENCHMARKING?

As its simplest level, benchmarking consists of comparing your organization with another. In this way you can decide whether your organization's performance is in some way failing short of the standard against which you compare yourself. This standard is the 'benchmark'.

Benchmarking can be undertaken in a variety of situations. In an organization-wide context all the key factors can be benchmarked. Such items as financial performance, Profit and loss, cash flow, investment, sales, production and productivity are all subject to regular benchmarking within industry and commerce.

Benchmarking is to create a competitive advantage.

“Benchmarking is a process of improving one’s performance by locating Benchmark/standards and replicating them in one’s own organization. Analyzing the competitors and locating the best practices within the given industry is the prime task involved in benchmarking. It helps in appraising the firm’s position as against the best in the industry.

BENCHMARKING PERSONNEL EXAMPLES:

The simplest example to comprehend benchmarking could be at the personal plane. My nephew aims to secure the highest aggregate score in the Secondary School examination. She has to consequently benchmark her performance against the performance of the student who holds the record for the highest aggregate score.

WHY BENCHMARKING:

The reasons for recommending the implementation of benchmarking exercise in organizations are to:

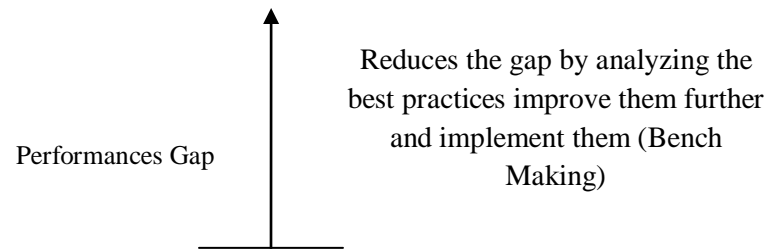
1. Increase efficiency
2. Promote understanding
3. Create awareness
4. Make continuous improvements
5. Enhance customer satisfaction
6. Gain commitment to Corporate goals
7. Improve profitability

WHEN TO DO BENCHMARKING EXERCISE?

Most of the companies started looking at problems only when they face the problems. In today’s context one has to be proactive rather than reactive. It is recommended that benchmarking is made as a cultural development of the organisation, especially when a business is facing hectic competition. Benchmarking also can be initiated the moment the business faces any one of the following threats: Rivalry among existing firms, Threat of Bargaining of Buyers, Threat of Bargaining of Suppliers, Threat from potential new entrants and Threat from substitute products.

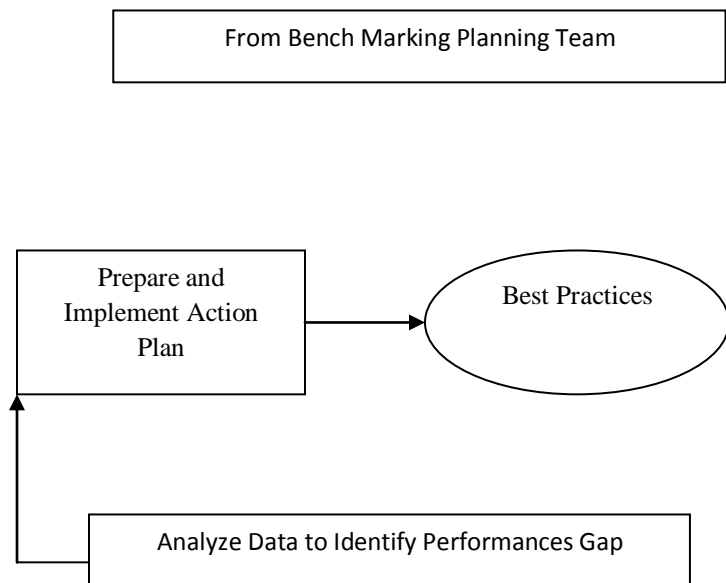
It is also recommended that the company goes on doing the competitor analysis on various parameters and find out the gap between the current performance of the company and that of the competitors. Various benchmarking factors have to be identified to bridge the gap.

Competitive performances on the same key Parameter



HOW TO DO BENCHMARKING: Your organization current performances in different key Parameter

STEPS IN BENCHMARKING:



TYPES OF BENCHMARKING:

1. Internal Benchmarking (Comparison within Organization)
2. Functional Benchmarking (Comparison of specific functional performance of competitor firms)
3. Competitive Benchmarking (Comparison with competitors – within the country and outside the country)
4. Generic Benchmarking (Comparison across companies / industries – Universal)

Successful companies definitely do the benchmarking exercise continuously. They may call it by different names as setting standards or objectives or goal setting. But the purpose is the same viz. to have competitive edge or advantage. This is more than applicable in Textile Industry where there is hectic competition from inside and outside the country.

BENCHMARKING IN TEXTILE INDUSTRY

As explained earlier benchmarking is a technique used to build competitive advantage. As competition prevails in all businesses including textiles, an effort is made here, what improvements are possible in textile industry to beat the competition.

Bench Marking in Textile Industry – Old Wine in a New Bottle
Some of the leading textile mills used to do benchmarking

even in early 70s. One such example is Madura Coats Limited. This company had 2 units at Madurai, one in Tuticorin, Ambasamuthram, Koratti in Kerela and Serampore in West Bengal. This company was a part of Coats Viyella Plc. who had textile units in 23 countries. A benchmarking exercise was practiced by this company in the name of Group Best Practices (GBP). Intra unit benchmarking was done by using industrial engineering techniques. Inter Unit benchmarking (among Indian Units) was done by comparing performance under various parameters among their six units in India and the same exercise was done on international basis. They had an exclusive department by name GBP department. They used to collect information from various units in different countries and analyze. In consultation with individual unit heads, they used to set standards. This was being done once in three years. This is nothing but benchmarking.

Sr. No.	Machines	Input/ Output	Purpose of Production
1.	Mixing ↓	Cotton fiber	This is the process of mixing different types of (Cotton Fibres) in a fixed ratio or weight based on the 'count' to be spun. This is normally done by manual workers. Now a days this can be done using 'automated' machines (bale pluckers)
2.	Blow room ↓ ↓ ↓ Lap former/ Scutcher ↓	Lap	Here the mixed fibres are carried by pneumatic pipes (buoyancy principle) or by suction to remove the heavy (foreign) particles by beating operation. The final product here is called as 'Lap' (with fixed weight / length wound on a metal (Lap) rod). (At present the laps are replaced by Chute or acro feed systems directly fed to carding machines)
3.	Carding Machine ↓	Silver	Input – Laps (or loose fibres through chutes) In carding machine the fibres of cotton are approximately parallelised by removing wastes, neps, etc. The output in this machine is called 'sliver' (Card Sliver)
4.	Draw Frame –I ↓	Passage-I Silver	Input – (either card sliver) ; Output – 'Drawing Sliver' This process draws / doubles 6 or 8 Slivers (ends) to form more uniform sliver by doubling action with a suitable draft (To improve the evenness)
5.	Draw Frame –II ↓	Passage-II Silver	
6.	Speed Frame/ Simplex ↓	Rove	Input – Drawn Sliver ; Output – Roving Lengthens and diminishing the sliver into thin 'roving' by suitable twist and draft and wound on a roving bobbin.
7.	Spinning Machine/ Ring Frame	Spun Yarn	Input – Roving ; Output – Yarn Here the machine draws out the roving and imparts the final twist and draft converts the roving into required yarn (Count) and is wound on a plastic/paper tubes (cops) as spun 'yarn'.

This paper deals with benchmarking exercises only up to spinning.

TERMINOLOGY USED IN THIS PAPER:

1. HOK- Employee hours to produce 100 kg of yarn – converted to 40s
2. OHS- Operative hours engaged for 1000 spindles per shift of 8 hours.
3. UKG -Number of Electricity Units consumed to produce 1kg of yarn and converted to 40s KW
4. UNITS PER LITRE OF DIESEL- Number of Electrical Power Units produced per 1 litre of diesel.
5. SIMA – The Southern India Mills Association
6. SITRA – The South India Textile Research Association
7. NPC – National Productivity Council
8. CONTRIBUTION/SPINDLE/YEAR – Sales Revenue – (Raw Material Cost + Cost of Power + Cost of Stores & Spares + wages and salaries)

SOURCES BASIC DATA USED FOR THE ANALYSIS:

All are secondary data.

Sources: Different Publications of SIMA (The Southern India Mills Association) and SITRA (The Southern India Textile Research Association).

LIMITATION: The study is made only with the members of SIMA and SITRA and that too in organized sector.
AN ANALYSIS OF SIMA ANNUAL REPORT 2009-2010

1. No. of member mills – 344
2. No. of workers employed - 1, 22,886
3. No. of Spindles in lakhs - 85.81
4. No. of mills participated in the Survey - 132 (Techno facts survey of 2002-2003)

Analysis based on 2009 – 2010 performance of 132 mills

PARAMETER	AVERAGE PERFORMANCE	% MILLS BELOW AVERAGE
HOK	24.322	42
OHS	2.70	48
Production/Spindle/Shift of Hours (Grams)	90.60	44
Units/Litre of Diesel	3.31	37
Absenteeism %	9.83	44

CONCLUSION

Performance of around 40% of the mills is less than industry

average.

INTERNAL BENCHMARKING:

40% of the mills who are not achieving even the average industry performance level may resort to intra unit study by a benchmarking team if they have good people with analytical ability or they can approach either SIMA, SITRA, National Productivity or Technical Consultants to conduct a method study/work measurement or a techno feasibility study if their plant is old.

ANOTHER DIMENSION OF INTERNAL BENCHMARKING:

There are some groups where there are more than one mill and there is vast difference in performance between one mill to another, which means, those mills can do Internal Benchmarking as mentioned above or inter unit benchmarking on the following areas :

1. Level of modernization and its effectiveness.
2. Power Consumed per kilo of yarn
3. Raw Material utilization and waste management
4. Absenteeism of employees
5. Capacity utilization especially Ring Frame
6. Wages and Salaries paid to their employees
7. HOK converted to 40s or for similar counts
8. Different work practices and management systems

Such an inter unit or intra firm analysis by a selected benchmarking team will throw lot of light for improvement. Examples could be, one mill may run their ring frame at a higher speed than the other (other parameters being equal) or capacity utilization may be low in one unit due to heavy absenteeism or machine breakdown is very high as compared to other unit. An in depth study will help to fix some benchmark for the unit of poor performance.

Sometimes it may be revealing that some practices being followed in the poor performing unit is so good, which deserve to be copied. It means that even in the bad performing units there can be some better practices worth emulating in the good performing unit.

Now let us have a look at “Best performing mill’s” performance as against “above average” and “average performing mills”.

THE DIFFERENCE IN PROFILE:

PROFILE OF EOU/HIGH TECH MILLS (15% of the total mills)	PROFILE OF ABOVE AVERAGE (15% of the total mills)	PROFILE OF AVERAGE PRODUCTIVITY MILL (40% of the total mills)
Mills equipped with modern machinery in all departments up to spinning, with best practice, good technologies, very high work assignment, excellent operational efficiency and producing high quality yarn with predominantly high proportion of exports.	Mills equipped with modern machinery in most of the departments, not necessarily best practice technologies, work assignments close to norms and achieving good operational efficiency and producing high quality yarns with some quantum of exports.	Mills with fairly modern machinery in various departments above average Operating efficiency, work assignment close to norms and producing yarns mostly for domestic market.

(The paper does not touch on Low Productivity and very low productivity mills as the tools required are similar – internal benchmarking and competitive benchmarking. (30% of the total mills)

ANALYSIS OF BEST MILLS, ABOVE AVERAGE MILLS AND AVERAGE MILLS :

	HOK	SPINDLE PRODUCTION (GRAMS)	CONTRIBUTION PER SPINDLE/YEAR
Best Mills High Tech	15.3	97	6020
Above Average Mill	20.3	91	4500
Average Mill	25.9	85	3350

This should be studied along with an ideal cost structure of a normal textiles mill: Figures converted to 40s carded yarn.

	PERCENTAGE (%)	CATGORY UNDER ANALYSIS A,B,C
Raw Material	55	A
Energy	14	B
Salaries and Wages	08	B
Stores and Spares	03	C
Depreciation	04	C
Interest	04	C
Overheads including Selling and Distribution	06	C
Profit	06	-
TOTAL	100	

A – ITEM - RAW MATERIAL :

If you go by the cost components, if one can save a small (A item) percentage of raw material, it will give huge money. But unfortunately

1. It is an external factor (Agriculture) on which Industry has got very little control.
2. It is seasonal and subjected to many natural phenomena/fluctuations
3. The cultivating area is widely spread throughout the country and that too with small agriculturists but controlled by few traders, mostly unethical. However contract forming, cluster forming, production of genetically modified cotton can be taken as benchmarks.

B-ITEMS – ENERGY :

Here, one can do competitive and generic Benchmarking. The cost of power from Electricity Board is about Rs.4.50 to Rs.5.00 per unit consumed. If benchmarking can be done in this area, it can be done which is completely within the control of mills :

SOURCE	COST OF POWER PER UNIT (Rs.)
Electricity Board	4.50 / 5.00
Own Generation by using diesel	3.50
Wind Mill	1.20
Gas Turbine	2.75

A study of successful mills shows that they meet their major requirements from their captive power plants – Diesel generator and wind mill. Those who rely only on EB power should benchmark the best mill in this aspect. Apart from this, mills can form cross-functional teams to analyze and come out with energy conservation methods. Power Management is definitely an area for Benchmarking.

B-ITEM : PRODUCTIVITY :

Benchmarking is a must in the area of productivity which includes benchmarking in Technology and modernization. There are three major components, in this area. They are

1. Level of Technology improvement and Modernization
2. Employee productivity and Cost
3. Management Practices.

C-ITEMS: As they are not going to help in turning around an organization I have not discussed them.

RELOOK : It is worth to have a relook at the profile of :

1. EOU/High Tech mills–High Productivity Mills)
2. Above Average Productivity Mills
3. Average Productivity Mill

KEY PARAMETER	BEST MILL S (15%)	ABOVE AVERAGE PRODUCTIVITY MILLS (15%)	AVERAGE PRODUCTIVITY MILLS (45%)
Modernisation of Machines	Very High	Limited to certain areas	Fair
Management Practices	Best	Good	Fair
Work Assignments Very High	Very High	Close to norms	Equal to norms
Quality of Product	Very High	High	Just OK
Market	Very High Export	Some Export	No Export

Benchmarking and establishing standards have to be done in the areas indicated above on war footing by average productivity mills and urgently by above average mills. Even the best mills should benchmark against “World class Manufacturing Practices”.

PROPOSED BENCHMARKING PATTERN

CURRENT STATUS	TO BENCH MARK TO (on key parameters as shown above)
Low Average Productivity Mills	Average Productivity Mills or to Above Average Productivity mills (Internal Benchmark competitor Benchmarking)
Average Productivity Mills	Above Average Productivity mill and if possible to Best Mill’s practices in certain aspects (Competitive Benchmarking)
Above Average Productivity Mills	Best Productivity/High Tech Mills and to go for world class practices in few key areas. (Competitive benchmarking and Generic Benchmarking)
Best Mills	World Class Productivity organization not only in textiles but also in comparable aspects of other industries. (Generic Benchmarking and international Benchmarking).

COMPETITIVE BENCHMARKING BY BEST MILLS :

It can be observed that the best mills maintain their performance level in all parameters. It means there is very little scope for further improvement? What the best mills can do is to study the world class mills of other regions in India and abroad and find out the gap between their performances. The best mills should benchmark their performance to match and beat other competitor’s performance in the world market.

GENERIC BENCHMARKING BY BEST MILLS :

The best mills of Southern India can study the best practices in other than textile Industry for similar operations. For example, unit cost of electricity produced; Management systems including structure of the organization like centralized and decentralized decision making; empowerment of employees; cost reduction practices; employee culture,etc can be studied by the benchmarking teams of best mills and set standards for achieving. This study in other industries can be done both in India and abroad.

This type of benchmarking can be called as Generic Benchmarking for Best Mills of Southern India.

Even the best can be bettered by Benchmarking exercise.

GENERAL BENCHMARKING AREAS AND NORMS FOR TEXTILE INDUSTRY:

1. Ring Spinning utilization : Benchmark : 99%
2. Improvement in productivity (expressed in HOK) – Benchmark : 15

3. Improved production per spindle per 8 hours (expressed in grams) – Benchmark-95
4. Decreased operatives per 1000 spindles (expressed in OHS) – Bench mark to 1.6
5. High standard in energy management (expressed in units consumed per one kits of yarn) – Benchmark to 2.4
6. High contribution per spindle (expressed in Rs. Per spindle per year) – Benchmark Rs.6000/- per spindle per year.
7. Apart from improving productivity of labour, continuous efforts should be made to reduce the employee cost per unit of production.

Different strategies can be followed to achieve this.

MARKET DRIVEN BENCH MARKING : Though we have gone through internal benchmarking, functional benchmarking, competitive benchmarking and generic benchmarking (all are done as intra firm and inter firm comparison), I would like to introduce the fifth type of bench marking which is very vital in today's competitive business scenario. That is named as **"Market Driven Benchmarking"**. You do the benchmarking which are required to meet market demands. We have to go on setting standards to meet the market demands as the market is very volatile especially in Textiles. If the market demand can be met only by BPR – benchmark it and do – if it requires TPM – do it ; if it requires product developments and value addition, one has to set standards and achieve. This type of benchmarking will alone help the organizations to survive and grow.

II. CONCLUSION

Benchmarking is a very good tool to have competitive advantage. Bench Marking in Textile Industry can be done in stages depending on the need to overcome competition. It need not be restricted to copying the best methods and standards from others, but it can be internal innovativeness.

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