THE INTERNATIONAL JOURNAL OF BUSINESS & MANAGEMENT

Comparative Analysis of Cost Leadership Strategies in the Indian Steel Industry: Case Study of SAIL

Parichay Bhattacharjee
Junior Manager, CRM-III, Bokaro Steel Plant, Steel Authority of India Limited, Jharkhand, India
Prashant Kumar Singh
Junior Manager, CRM-III, Bokaro Steel Plant, Steel Authority of India Limited, Jharkhand, India
Sudeepto Sikdar
Junior Manager, SMS-I, Bokaro Steel Plant, Steel Authority of India Limited, Jharkhand, India

Abstract:
This study is intended to analyze the Indian Steel Industry from the purview of Cost Leadership and draw a comparison between Six Major Steel producing companies operating from India, viz, Steel Authority of India Limited (SAIL), Tata Steel, JSW Steel, Bhushan Steel, Jindal Stainless and Uttam Value Stainless. Analytical study from numerous relevant sources were accompanied by field survey. The company in focus for the survey phase was Steel Authority of India Limited (SAIL). The survey was conducted based on close ended questionnaires to almost all relevant stakeholders of the organisation. The respondent set was further classified into seven groups of stakeholders, viz, Employees of SAIL in the Senior Non-Executive Grade, especially ones who have been received Shram Award and/or Vishwakarma Rashtriya Puraskar, Employees of SAIL in E1-E5 Grade, i.e. Junior and Middle Level Executives, Employees of SAIL in Grade E6 and Above, i.e. Senior Level Executives, Contractors having tie-ups with SAIL, Sellers of SAIL products, Technology Partners of SAIL, Other Steel Companies and Competitors of SAIL. Analytical research was done based on data from Capitaline Corporate Database and Self calculations for the aforementioned six companies based on a set of variables deemed to affect Cost Leadership strategies. They are Net Sales (NS),Adjusted Net Profit (ANP),APATM (Adjusted profit after tax margin), R & D expenses (R & D), Assets Turnover(AT), RONOA (Return on Net Operating Assets), PBIDTM (%), MS (Market Share),Cost of Production(COP).The survey questionnaires were designed based on a modification of the Likert Scale and acquiescence bias was nullified as par as practicable.

Keywords: *Cost, Cost Leadership, SAIL, Steel Industry*

1. Introduction

1.1. Background of the Study

Cost is the amount of resources used for something which must be measured in terms of money [1]. Michael Porter defined strategy in 1980 as the "...broad formula for how a business is going to compete, what its goals should be, and what policies will be needed to carry out those goals" and the "...combination of the ends (goals) for which the firm is striving and the means (policies) by which it is seeking to get there."[2] Porter (1980) broadly propounded cost leadership strategy for the first time. Cost leadership aims at reducing costs throughout the value chain and reaching the lowest cost structure possible.

A cost leader enterprise puts products with an acceptable quality and limited standard features on the market in order to gain competitive advantage and to maximize its market share. Such kinds of enterprises appeal to a wide group of customers.

1.2. Statement of the Problem

Cost competitiveness has been at the heart of the Japanese success in 1980s. This will help to enhance the competitive strength of individual firms by utilizing the available resources efficiently and effectively. Buckley' view of competitiveness is at the firm level (Buckley et al., 1988); a firm is said to be competitive if it can produce goods and services of superior quality at a relatively lower costs than its domestic and international competitors. While Porter (1998) argues that competitiveness meant the ability to compete in world markets with a global strategy. As a result, it became firms' ultimate goal to craft cost leadership strategies (Porter). The firm takes advantage of cost leadership by creating new market pace with innovative product and services. The cost leadership strategy has been successfully implemented in Japan. For example, the Toyota company system - Its superior competitiveness in cost reduction,

quality and delivery time, has provided the impetus for a worldwide shift toward increasing efficiency through cost-cutting strategies (Schonberger, 1994). Cost leadership strategies are preferred in developing countries such as Indonesia, Malaysia, India and China where they have lower labour cost, and hence, a lower production cost (Aulakh et al. 2000).

1.3. Research Objectives

To search for the cost leader and justify the cost leadership strategies for the Indian steel industry and to identify specific strategies implemented by Cost Leaders and compare them with that of Steel Authority of India Limited (SAIL)

1.3.1. Specific Objectives

In order to adequately address the overall objective, this study will be guided by the following specific objectives:

1. To identify specific Cost Leadership strategies adopted and implemented by the top six steel companies in the category of Steel industry (Large and Mid. & Small) as classified in the Capitaline Corporate database.
2. To make a comparative analysis of Cost Leadership strategies adopted by the companies in consideration correlate the findings with the variables considered for the research, viz. Net Sales (NS), Adjusted Net Profit (ANP), APATM (Adjusted profit after tax margin), R & D expenses (R & D), Assets Turnover(AT), RONOA (Return on Net Operating Assets), PBIDTM (%),MS (Market Share),Cost of Production(COP) during the period covering six years ending on March 31, 2014.
3. To identify Issues and Challenges for SAIL in Emerging as a Cost Leader through survey, questionnaire, discussions and interviews along the entire length of the value chain and laterally across the cross section of the organization.

2. Literature Review

2.1. Introduction

2.2. Theoretical Review

This research was directed to compare the cost leadership strategies and establish a relationship between the strategies implemented and performance obtained for the major steel making companies in India. Furthermore, the performance of SAIL was studied in the light of the organically established framework for research and this study was based on the corporate internal control theory. This theory is concerned with managing the relationship among various corporate stakeholders and employees. This theory has been considered for this study because Internal Control helps managers achieve desired results through effective stewardship of resources; internal controls reduce the risks associated with un-detected errors or irregularities and are a goal oriented theory.

2.2.1. The Concept of Cost Leadership

Cost is the amount of resources used for something which must be measured in terms of money [1]. Michael Porter defined strategy in 1980 as the "...broad formula for how a business is going to compete, what its goals should be, and what policies will be needed to carry out those goals" and the "...combination of the ends (goals) for which the firm is striving and the means (policies) by which it is seeking to get there."[2] Porter (1980) broadly propounded cost leadership strategy for the first time. Cost leadership aims at reducing costs throughout the value chain and reaching the lowest cost structure possible. A cost leader enterprise puts products with an acceptable quality and limited standard features on the market in order to gain competitive advantage and to maximize its market share. Such kinds of enterprises appeal to a wide group of customers.

2.2.2. Understanding Issues and Challenges for becoming a Cost Leader

The competitive advantage of cost leadership is achieved by performing important value chain activities at lower cost than competitors (Porter M. , 1985). Cost leadership requires a strong focus on the supply side as opposed to the demand side of the market, as this requires a high level of competitor orientation (Day, 1998). Cost Leadership tends to be more competitors oriented rather than customer oriented (Frambach, et. al, 2003). Cost-leadership strategy strives to supply a standard, no-frills, high-volume product at the most competitive price to customers (Li & Li, 2008). The cost leadership strategy is an integrated set of action taken to produce goods or services with features which are acceptable to customers at the lowest cost, relative to that of competitors (Ireland, 2011). An important requirement of the cost leadership strategy is “heavy up-front capital investment in state-of-the-art equipment” (Porter, 1980). So, Kiechel (1981) says that in order to maintain cost leadership a firm should therefore “buy the largest, most modern plant in the industry.” In basic industrial commodities, such as pulp, paper, and steel “knocking a couple of percentage points off production costs has far more strategic impact than all the weapons the marketer could employ in these industries” (Bennett & Cooper, 1979). According to this theory, the market-share leader can under-price competition because of its lower costs due to its cumulative experience, thus “further hastening its drive down the curve” (Kiechel, 1981).

2.3. Empirical Literature

2.3.1. Different Cost Leadership Strategies

Utterback and Abernathy (Utterback, 1975) theoretically describes three competitive strategies associated with the innovative patterns of firms: performance maximizing, sales maximizing and cost minimizing. Porter (Porter M. , 1980) suggests that differentiation, cost leadership and focus are the strategies that provide firms with the ability to attain a competitive advantage and outperform rivals in an

industry by cost reduction in every stage. Miller (Miller, 1988) suggests four broad categories of dimensions that reflect competitive strategies. These dimensions are differentiation, cost leadership, focus and asset parsimony. The cost leadership dimension measures if firms are producing products cheaper than their competitors. Schuler and Jackson (Schuler, 1987), based on Porter's typology, identify three competitive strategies that firms can use to gain competitive advantage: innovation, quality enhancement and cost reduction. Under the cost reduction strategy, a firm tries to be lowest cost producer in the industry. Ward, Bickford and Leong (Ward, 1996) propose four basic strategic configurations: niche differentiator, broad differentiator, cost leader and lean competitor. Cost leaders attempt to offer products at a lower price than competitors. In addition to Porter's generic competitive strategies, some strategy textbooks offer a fifth strategic choice, namely best cost provider strategy (Thompson, 1999) and integrated low cost differentiation strategy (Hitt, 2007). These strategies imply that a firm can gain advantages by offering products with unique features at a lower price compared with its competitors. Chang, Lin, Wea and Sheu (Chang, 2002) develop three strategy categories are classified: pre emptive/first mover, low cost/ follower and differentiation/follower. The low cost/follower firm enters the market late or has a late adoption of new technology. These firms try to achieve competitive advantage by strict cost control policies.

2.3.2. Analytical Research Variables for Comparative Analysis of Cost Leadership Strategies

i. Net Sales (NS),
ii. Adjusted Net Profit (ANP),
iii. APATM (Adjusted profit after tax margin),
iv. R & D expenses (R & D),
v. Assets Turnover(AT),
vi. RONOA (Return on Net Operating Assets),
vii. PBIDTM (%),
viii. MS (Market Share),
ix. Cost of Production (COP) during the period covering six years ending on March 31, 2014.

3. Research Methodology

3.1. Introduction

This chapter presents the methodology that was used during the study. The research was divided into two parts; Analytical research of major Indian steel companies based on data from Capitaline Corporate Database and self calculations and Practical research on the Issues and Challenges for SAIL in becoming a Cost Leader based on survey, questionnaire and interviews.

3.2. Analytical Research Methodology

The researchers considered the top six steel companies in the category of Steel industry (Large and Mid. & Small) as classified in the Capitaline Corporate database for the Analytical Research phase.To search for the cost leader, the researchers considered aforesaid variables

To measure the significance of the variables descriptive statistics was used and modified Du Pont model was applied to observe the firm's strategies.

Palepu and Healy (2008) suggest that a firm pursuing cost leadership strategy may generate a relatively low profit margin but balance that against a relatively high asset turnover. Little et al (2009) concluded that the Du Pont model enabled them to determine that for a firm to be successful with cost leadership it was through generating asset turnover while success with differentiation was through generating profit margins. Philip et al. (2011) shows that some firms follow differentiation strategies (i.e. profit margin is high and asset turnover is low) and cost leadership strategies (i.e. profit is low and asset turnover is high).

The modified Du Pont model is as follows:

a. RONOA = OPM x AT

Where; RONOA (Return on Net Operating Assets) = Net Income / (Fixed Assets + Net Working Capital)

b. OPM (Operating Profit Margin) = (Operating Income / Sales);
c. AT (Asset Turnover) = (Sales / Net Operating Assets)
d. Operating Income = Sales - Cost of Sales – Operating Expenses
e. Net Operating Assets = Accounts Receivable + Inventory + Net Property, Plant, and Equipment

3.3. Research Design

The entire survey population was divided into seven categories

1. Employees of SAIL in the Senior Non-Executive Grade, especially ones who have been received
2. Shram Award and/or Vishwakarma Rashtriya Puraskar
3. Employees of SAIL in E1-E5 Grade, i.e. Junior and Middle Level Executives
4. Employees of SAIL in Grade E6 and Above, i.e. Senior Level Executives
5. Contractors having tie-ups with SAIL
6. Sellers of SAIL products
7. Technology Partners of SAIL
8. Other Steel Companies and Competitors of SAIL

3.4. Questionnaire Design

Separate questionnaires were prepared for each category based on the modified Likert Scale. The respondents were asked to mark their responses to items on a scale of 1 to 4, with 1 meaning "Strongly Disagree", and 4 meaning "Strongly Agree". The researchers had intentionally left out the middle path i.e. "undecided" (or "can't say") to have clear opinion from our respondents. To analyze the responses, we then entered the data into a database and calculated the weighted average for each question to arrive at the mean score.

3.5. Result Interpretation

The results were interpreted as :

1. Mean Score > 3.0 : The attribute is highly visible in the organization
2. 2.75 < Mean Score < 3.0 : The attribute exists in quite a good extent in the organization
3. 2.50 < Mean Score < 2.75 : The attribute is moderately visible in the organization
4. Mean Score < 2.50 : The attribute is rarely visible in the organization

3.6. Demographic Characteristics of Respondents

Senior Non Executives	124
Junior & Middle Management	281
Senior Executives	125
Contractors	47
Sellers	25
Technology Partners	140
Competitors	184
Total	**926**

Table 1: Category wise Respondent Breakup

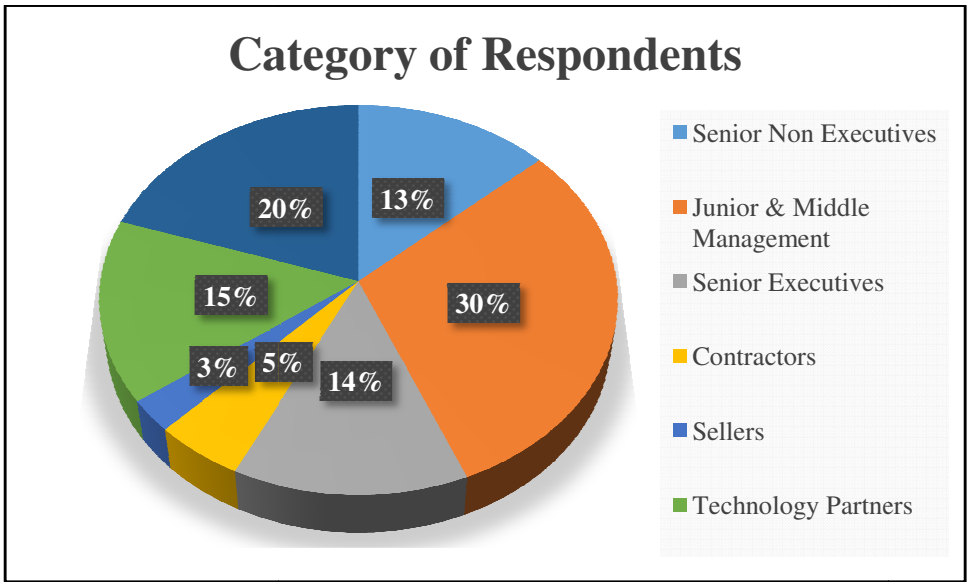

Figure 1: Category of Respondents

4. Research Results and Discussion

4.1. Introduction

This chapter brings out the research results and discussions. Data is hereby presented in line with the methodology of the study described in chapter three above while the discussions are guided by the results of the study.

4.2. Analytical Research Results

We have followed modified Du Pont model and below table is showing the Mean and Standard Deviation. Value of the selected variables for six year starting from March, 2009 to March 2014 is tabulated as follows

		SAIL	Tata Steel	JSW Steel	Bhushan Steel	Jindal Stainless	Uttam Value Stainless
AT	**Mean**	**0.80**	1.20	1.01	0.64	0.81	1.84
	SD	**0.07007**	0.19439	0.06348	0.38982	0.14335	0.38682
PBIDTM%	**Mean**	**17.30**	33.59	19.55	25.91	10.90	2.78
	SD	**6.90768**	4.77727	3.06591	3.34379	5.03595	2.7685
RONOA	**Mean**	**13.68**	40.26	19.70	15.76	8.93	5.76
	SD	**5.31779**	8.39886	3.76329	7.71999	4.87745	5.03198
MS	**Mean**	**0.19**	0.13	0.12	0.04	0.04	0.02
	SD	**0.02503**	0.01506	0.03834	0.00548	0.00837	0.00816
APATM	**Mean**	**8.86**	16.89	6.63	8.83	-0.72	-2.84
	SD	**4.71952**	3.54337	2.2143	4.87698	4.88587	3.15942
COP/NS	**Mean**	**0.87**	0.58	0.84	0.77	0.92	0.99
	SD	**0.04517**	0.0295	0.02066	0.02858	0.04561	0.02317
ROE	**Mean**	**13.17**	14.40	13.64	16.36	-0.44	-0.09
	SD	**8.37471**	4.39894	5.09784	9.83718	18.53661	0.22045
R&D	**Mean**	**120.50**	59.87	35.66	N.A.	0.89	0.07
	SD	**12.37017**	17.27698	20.75533		0.46685	0.04243
R&D % to NS	**Mean**	**0.25**	0.19	0.03	N.A.	0.01	0.00
	SD	**0.02881**	0.0437	0.03886		0.00983	0
Source : Capitaline Corporate Database and Self Calculations							

Table 2: Mean and Standard Deviations for Analytical Research Variable for Various Indian Steel Companies

4.3. Research Result Analysis

It was seen from the above table that most of the selected firms are in low PDIDTM mean like Uttam Value Steel (2.78), Jindal Stainless (10.90), SAIL (17.30), JSW Steel(19.55) and their COP/NS ratio is very high but Tata Steel (33.59) and Bhushan steel(25.91) are in high PBIDTM and comparatively low COP/NS ratio. Mean AT ratios of Uttam Value Steel is very high i.e 1.84 and for Bhushan steel it is lowest i.e.0.64. RONOA of Uttam Value Steel is 5.76 and for Bhushan steel is 15.76 with this the ROE is negative for Uttam Value Steel; whereas 16.36 for Bhushan steel. In the above table we have seen that more than 70% market share held by SAIL, Tata Steel and JSW steel. Tata Steel enjoys high PBIDTM compare to other sample companies but mean of AT ratio also highest i.e.1.20 and COP to sales ratio is 0.58 finally, RONOA is 40.26. SAIL enjoys moderate PBIDTM but AT ratio is 0.80 and COP to Sales is 0.87, RONOA is 13.68. For JSW steel PBIDTM is moderate (=19.55), AT ratios (=1.01), COP/NS (=0.84) and RONOA is 19.70.

4.4. Questionnaire and Survey

4.4.1. Questionnaire and Responses for Employees of SAIL in the Senior Non-Executive Grade

Q.No.	Question	Strongly Agree	Agree	Disagree	Strongly Disagree
1	There is a lot of restriction for any new ideas from us	32	45	24	23
2	I believe in repairing and re-using items as efficiently as I can	56	36	15	17
3	Scheduled maintenance never done as planned and many a times they are skipped to attend breakdowns.	15	18	45	46
4	Periodic assessment regarding waste management is done by the officers	18	17	58	31
5	On-paper targets and ground reality are much different and many a times we have to compromise on the quality to meet our assigned targets	28	34	39	23
6	New recruitments are sensitive towards cost management and help us do the same.	37	46	26	15
7	Training on anything that comes new in the shop is confined only amongst the officers	58	29	22	15
8	Implementation of new machinery in my shop will help increase production and reduce down-time.	49	47	15	13
9	Lack of safety gears is a prime concern for us when it comes to timely maintenance and achieving production targets	36	41	26	21
10	Our opinion is asked for and valued in day-to-day operations.	36	34	29	25
11	In order to save money, the company provides us second grade spares which does not solve our breakdown problems, as they don't have a longer life	45	42	19	18
12	We are given freedom to work on and come up with innovative solutions to existing problems. Later, they are implemented after their feasibility study.	25	39	36	24
13	In case of a major breakdown, most of the times our opinion is sidelined by senior officers.	41	33	27	23
14	We are motivated to adopt best practices and adhere to highest standards of safety and maintenance and not only focus on just meeting production targets.	14	19	38	53
15	I do not feel that new machines estabhlished will be as rugged as the previous machineries which we have been maintaining for years now	26	28	33	37
16	We are given proper training and hands-on exposure whenever a new technology or system is installed to help us adapt quickly.	12	17	49	46
17	New recruitments are yet to develop a sense of ownership towards the plant which will reap good on the coming future	43	36	30	15
18	We receive quantifiable and achievable targets and feedback regarding them are taken regularly to ensure that we are committed to putting in our best efforts to achieve them.	24	20	47	33
19	My busy schedule does not allow me to think about waste management	26	34	39	25
20	We are always consulted during the planning of schedule maintenance and we have made our habit to do this in a way that breakdowns get reduced.	37	40	28	19
21	Things that are burnt out or damaged should not be repaired and should be replaced with entirely new units	24	36	31	33
22	SAIL always cares about our facilities so that we can concentrate on our job.	12	14	53	45
23	I am not aware about any cost and financial matters of SAIL.	39	50	16	19
24	I rarely get involved in the financial matters of my department.	46	43	20	15

Table 3 : Questionnaire for 124 Senior Non-Executives of SAIL

4.4.2. Questionnaire and Responses for Employees of SAIL in the Junior and Middle Management Grade

Q.No.	Question	Strongly Agree	Agree	Disagree	Strongly Disagree
1	SAIL as a company is cost conscious	54	138	48	41
2	There is a very limited scope of two way communication in my department	62	88	84	47
3	Seniors always make us aware of cost efficiency, its importance and impact	10	23	92	156
4	Obsolete technologies and practices in SAIL is taking the company back.	193	56	21	11
5	I have given enough freedom to my sub-ordinates to think out of the box and connect to new ways beneficial for the organization.	158	86	28	9
6	Appraisal needs to be realtime and Promotion and Growth within the Organization needs to be linked to constantly monitored and well defined performance metrics.	96	123	56	6
7	Quality of work is not compromised on account of cost	56	84	89	52
8	There are more decision makers in the company than those who actually work in the ground level to implement those decisions	115	124	25	17
9	I have developed specific teams to attend specific breakdowns efficiently to reduce down-time	69	75	93	44
10	Timely promotions keep us motivated to work in a planned and timely manner.	193	56	19	13
11	I follow the basic practices of energy and power saving and inculcate the same to my juniors	142	98	22	19
12	Non-executives don't have a sense of ownership and rather than inculcating the same in them, it is better to take out the assigned work from them.	87	83	63	48
13	I practice to develop a sense of ownership among my co-workers, so that they give their best to reduce down-time	56	34	148	43
14	My main aim is to achieve production targets rather than concentrating on petty issues like switching off lights when not necessary.	45	58	116	62
15	Emerging as a cost leader means identifying potential leaders and grooming them rather than timely promotions.	148	72	42	19
16	I expect every employee to know a bit of everything rather than developing expertise in any particular field	63	87	64	67
17	Hierarchy followed in SAIL ensures proper planning and a healthy work culture.	159	63	38	21
18	I would prefer even second grade spares, if it meets my requirement.	23	74	97	87
19	The EPMS system in SAIL is at par with the leading companies.	12	42	136	91
20	Attending breakdowns adheres to simple rules and I expect people working under me to follow only those.	69	58	87	67
21	Technologies adopted by SAIL are latest, cost efficient and comparable to the world standards.	23	41	115	102
22	Seniors only care about production and profit making and at times neglect cost efficiency	73	86	62	60
23	Suggestions and ideas have a consistent flow from my seniors, which help me improve my working.	53	61	86	81
24	I rarely get involved in the financial matters of my department.	89	76	62	54

Table 4 : Questionnaire for 281 Junior and Middle Level Executives of SAIL

4.4.3. Questionnaire and Responses for Employees of SAIL Senior Management Grade

Q.No.	Question	Strongly Agree	Agree	Disagree	Strongly Disagree
1	SAIL as a company is cost conscious	46	52	14	13
2	There is a very limited scope for two way communication in my department	16	18	49	42
3	Employees of SAIL are aware of the consequences of ever increasing operating cost	25	31	39	30
4	Employees need to come out of their comfort zone to push the company back on track in crisis situations	36	49	29	11
5	I prioritize cost cutting in my day to day working plans	34	44	29	18
6	To make our machineries work on a more durable basis, replacement of damaged items with new ones are preferable over repaired items.	49	43	23	10
7	At SAIL, Quality of work and cost efficiency are maintained everywhere inspite of the pressure of achieving production targets	26	34	32	33
8	Our employees take limited interest in reverse engineering	26	49	38	12
9	We often tend to focus more on short term profit making rather than sustainable cost leadership	47	49	16	13
10	There is lot of scope for development in our short term planning strategies	36	39	29	21
11	I motivate my juniors to dedicate a part of their daily working hours to analyze the impact of their actions and align them so as to reap maximum benefit for the company.	46	34	28	17
12	Employees are unaware of the financial impact of their actions on the company	41	53	19	12
13	Our employees are fully aware of the fixed and variable costs of their concerned departments and the organization as a whole	16	14	52	43
14	I feel that Junior Executives and Non Executives do not take much interest in cost analysis of their departments and SAIL as a whole	42	51	18	14
15	Decisions taken in day to day operations take into consideration the time value of money involved	21	19	47	38
16	Working for SAIL's vision, many a times it happens that we miss out on short-term profits.	30	26	32	37
17	I have given enough freedom to my sub-ordinates to think out of the box and connect to new ways beneficial for the organization.	39	42	23	21
18	In the race for achieving production targets we compromise on the quality and machine's life span	37	39	26	23
19	I have developed a practice to repair the damaged items efficiently and encourage the same to others	30	46	28	21
20	I tend to and also motivate others not to compromise on quality and cost optimization	36	43	24	22
21	I focus on developing and implementing quantifiable targets and devise strategies to achieve them	45	50	18	12
22	I feeI that l myself need some training on cost cutting	49	53	16	7
23	I have maintained a healthy interaction with my juniors so that we build a team that achieves targets working together.	36	41	29	19
24	There is a need to educate employees about the business situation of steel market	42	51	21	11

Table 5 : Questionnaire for 125 Senior Level Executives of SAIL

4.4.4. Questionnaire and Responses for Contractors Having Tie Ups with SAIL

Q.No.	Question	Strongly Agree	Agree	Disagree	Strongly Disagree
1	We would prefer a system of penalty for delays and demurrages to exist, to be payable to us for delays arising from SAIL's side.	24	19	4	0
2	Business with SAIL is not as easy as it is with other companies, in terms of response and co-operation from the customer's end	16	9	14	8
3	We would prefer a system of penalty for delays and demurrages to exist, to be payable by us for delays arising from our side.	11	30	4	2
4	Delays in payments received for our product/service disturbs our budget and demotivates us to continue doing business with SAIL	17	18	8	4
5	Supply chain and logistics system of SAIL is well developed and comparable to other market leaders.	13	21	6	7
6	Transaction with SAIL can be more transparent with greater accountability on either sides	2	6	29	10
7	The product/service supplied by us to SAIL goes through stringent quality checks and payment is done only after we are able to satisfy them	26	15	4	2
8	In my opinion, SAIL, as a company is not cost conscious	13	11	9	14
9	Features such as Online Tendering System have made working with SAIL more transparent, fast and easy	18	22	6	1
10	People here at SAIL always try to throw the ball in our court in cases where we miss out something rather than helping us out to expedite the work.	14	19	8	6
11	Working with SAIL is easier and more hassle free compared to that of other companies in the same segment	5	9	23	10
12	Quality and benchmarking of the product/service we provide to SAIL is not well defined and often leads to confusions	10	12	17	8
13	Quality and benchmarking of the product/service we provide to SAIL in well defined in their end in quantifiable terms and monitored regularly	10	19	10	8
14	Transactions with SAIL involves lot of paper works, delayed file movements which makes the process slow and complex	15	19	6	7
15	Working with SAIL is a matter of pride for us and we often have to sacrifice a percentage of our profits just to remain associated with such a reputed brand	19	20	4	4
16	SAIL's system of clearance, certification and verification is complicated when compared to other companies we deal with	14	18	9	6
17	Working processes in SAIL are extremely lean and cost consciousness is clearly visible in whatever interaction we have with the SAIL representatives	10	12	16	9
18	SAIL is lenient when it comes to verification of quality of the products/service we supply to them	15	9	13	10
19	Highest standards of ethics and accountability is maintained at every corner in SAIL	9	4	19	15
20	Product delivery to/from SAIL units is a cumbersome process	21	15	6	5
21	Payment received from SAIL on account of our product/service is timely disbursed and this keeps us motivated to continue doing business with them	14	8	15	10
22	Delays in receiving our product/service from SAIL's end leads to unnecessary delays and disturbs our planning and affects our profits	11	17	10	9
23	SAIL arranges for items in cases of urgency that we sometimes lack during our work.	8	20	11	8
24	Delays in delivering a product/service to SAIL is penalized which adversely affects our budget and profits	15	18	9	5

Table 6 : Questionnaire for 47 Contractors having Tie Ups with SAIL

4.4.5. Questionnaire and Responses for Sellers of SAIL Products

Q.No.	Question	Strongly Agree	Agree	Disagree	Strongly Disagree
1	Price of SAIL products is in sync with its quality and it depicts a thorough market research	5	10	6	4
2	Quality of coils packaged and related logistics for SAIL needs improvement	11	7	4	3
3	SAIL incentivizes us better which makes us a bit more partial towards selling their products	3	7	12	3
4	In case of a problem or disparity, the response time of SAIL is simply pathetic	4	8	8	5
5	SAIL has provided us enough knowledge as to how their products are better than others	7	6	8	4
6	Our customers have been shifting from SAIL products recently.	2	5	11	7
7	Marketing strategy of SAIL is one of the best in the market	1	4	12	8
8	There have been a lot many times that our image got tarnished due to poor quality/availability of SAIL products	4	9	7	5
9	SAIL representatives interact with us frequently to assess their performance and market share	7	9	4	5
10	We always get to sell the same SAIL products again and again, which symbolizes that the company is not thinking to expand its range of products anytime soon.	2	8	11	4
11	SAIL representatives help us in building proper inventory for the stock	5	11	8	1
12	Low and middle level customers often go for local companies as compared to SAIL products	9	12	3	1
13	Domestic customers are more inclined to purchase SAIL products due to high quality	4	9	7	5
14	SAIL is not very efficient in guiding us to maintain of proper inventory of stocks by predictive research on market trends and demands	2	12	7	4
15	Range of SAIL products is better as compared to other competitors	7	13	2	3
16	Representatives from SAIL rarely visits to check about our sales and their performance compared to other companies	6	3	7	9
17	Constant supply of stock is monitored well by SAIL representatives	4	8	10	3
18	Advertisements of SAIL products are not par as compared to its competitors	10	9	4	2
19	Customer complaints of SAIL products are less frequent and rejection ratio is lower as compared to its competitors	6	8	8	3
20	Product manuals from SAIL is not at par to other companies	9	7	5	4
21	Our feedback is taken by SAIL in a timely manner and our opinion is valued and necessary impact is visible within a finite time	3	6	10	6
22	During our lows, the company is not moderate enough which has someway developed a sense of negativity towards the company	4	11	8	2
23	Coil packaging and transportation of SAIL is well developed and comparable to other market leaders.	10	7	6	2
24	SAIL has under-priced its product in accordance to its quality	6	4	8	7

Table 7 : Questionnaire for 25 Sellers of SAIL Products

4.4.6. Questionnaire and Responses for Technology Partners of SAIL

Q.No.	Question	Strongly Agree	Agree	Disagree	Strongly Disagree
1	SAIL lags in its timely release of payment which pulls our team's enthusiasm back for a speedy completion	38	66	23	13
2	SAIL invests intelligently to build its technology	41	53	28	18
3	The tendering process in SAIL is transparent and cost efficient	39	62	18	21
4	There is a lot of communication gap between the junior and senior officers in SAIL as compared to other industies which doesnt let any good ideas flow	29	57	22	32
5	A thorough study of new projects is held at SAIL and they demand the best in technology at the most effective price	43	61	19	17
6	I feel there is not a lot of space for new ideas amongst the SAIL employees	37	58	29	16
7	SAIL facilitates its employees in learning about the new commissioned technologies	48	71	15	6
8	People in direct interaction with us are too casual in their approach	43	54	32	11
9	Timely assessment of our day-to-day work is done efficiently in SAIL	21	29	48	42
10	During our commissioning process, if an item gets damaged, people here at SAIL ask for its replacement, and are least concerned to review the damage.	34	51	36	19
11	Working here has given us a lot of ideas where we can have the same cost control measures in our own organization.	28	36	47	29
12	When working with SAIL, planning done on the paper is quite different from what it is at the ground level	39	43	34	24
13	People here at SAIL adhere strictly to the planning done and make sure that we are at par with it.	28	31	48	33
14	SAIL is not serious in its cost control methods and we see wastages all around us.	42	51	26	21
15	People at SAIL believe in intelligently reusing a damaged item rather than buying a completely new replacement.	46	61	19	14
16	Enthusiastic involvement of the people for timely completion of projects is more in other clients projects as comapared to SAIL	37	59	31	13
17	We always feel the impact of a positive pressure from SAIL people to expedite the erection and commissioning processes we are involved in. This is comparable to what we experience at sites of leading steel plants.	47	63	20	10
18	Offshore training arranged for SAIL people often turn as a pleasure tour as SAIL engineers do not take training seriously	26	41	38	35
19	People at SAIL are willing to learn new technologies and implement them to improve their systems and processes.	34	49	31	26
20	Bad decisions made previously has landed SAIL in a lagging state despite investing so much amount in its expansion projects	36	40	45	19
21	Healthy communication between the junior and senior officers here at SAIL helps us in our planning and quick expedition of work.	19	26	58	37
22	The system of selecting the firm bidding for the lowest price for a project/tender often causes inefficient and incapable firms getting selected, which delays the commissioning of projects	43	61	23	13
23	Payment received from SAIL on account of our product/service is timely disbursed and this keeps us motivated to continue doing business with them	31	56	41	12
24	SAIL compromises with the investment over state-of-art technology	16	31	64	29

Table 8 : Questionnaire for 140 Employees from Technology Partners of SAIL

4.4.7. Questionnaire and Responses for Other Companies and Competitors of SAIL

Q.No.	Question	Strongly Agree	Agree	Disagree	Strongly Disagree
1	SAIL has given more facilities to its employees compared to us	31	52	68	33
2	I feel that SAIL offers better deal to its customers	26	37	57	64
3	We are yet to match the quality and standards of SAIL products	31	49	55	49
4	If I get an opportunity at a similar profile, I am willing to leave my organisation to join SAIL	19	25	78	62
5	SAIL has better marketing strategy as compared to our organization	24	30	66	64
6	I feel that the people at SAIL are good decision makers and interactions with them always help us in our organization	58	69	39	18
7	SAIL has a better team to address to customer complaints	34	49	67	34
8	SAIL,being a Maharatna, enjoys financial freedom and has huge reserves of land and resources, and with the upcoming projects it will surely come up a long way	54	73	34	23
9	I feel that SAIL is an organization which constantly craves for advanced technology and features ahead of us	38	46	53	47
10	SAIL has the infrastructure and resources to see through the lean phases of the cyclic nature of the steel industry and quickly change gear to reap profits when conditions become favourable.	47	78	32	27
11	We face stiff competition from SAIL products in the market and their product mix is more diverse than ours.	41	55	49	39
12	I feel that there is a much better interaction of junior and senior officers at SAIL.	21	34	82	47
13	Being a PSU, I feel that SAIL is not as dynamic as us on innovative front	49	71	38	26
14	I feel that SAIL has always been under-performing inspite of its high potential	51	82	26	25
15	I believe there is a case of overstaffing in SAIL, which has become more of a liability and is pulling back their capacity	38	66	45	35
16	I do believe that SAIL had, at a time, the best technologies in the country, but it has failed to adapt to the changing economic times	37	69	41	37
17	Our company gives better salary package and facilities, and if given an opportunity I guess people from SAIL will be more than willing to shift here	36	57	48	43
18	Enjoying its PSU status, SAIL has engendered lethargy and a culture of over confidence which helps competitors like us to perform better than them in the market.	39	46	62	37
19	Technologically we are at a superior position than SAIL	59	68	32	25
20	We are more efficient than SAIL in reaching out to customer complaints and rectifying them	47	78	26	33
21	Quality is a thing I understand that SAIL compromises with in lieu of its assest liabilities, and will be a major factor in the future for us to win over SAIL	31	49	62	42
22	I understand that decision making in SAIL is not as prompt as our organization, which gives us an edge over them	56	82	31	15
23	I feel that SAIL has invested a lot in their expansion projects but has not been able to complete the projects on time, which has had a toll on their profitability	56	63	41	24
24	Knowledge transfer amongst us are way better than that in SAIL	44	67	48	25

Table 9 : Questionnaire for 184 Employees from Competitors of SAIL

4.5. Survey Result Analysis

The survey was conducted with separate survey instruments or questionnaires for each and every catergory of respondents earmarked. This was done so as to present the respondents with questions relevant to them. Quite a few number of observations were made by the researchers who presented the respondents with close ended questionnaires. More than 77.4% Senior Non Executives affirmed that they believe that implementation of new machinery in their shops would help increase production and reduce down-time whereas more than 71.7% replied that they rarely get involved in financial matters of the department. 88.6% of the respondents in the Junior and Middle Management grade replied that use of obsolete machineries and adhering to old technologies is a hindrance for SAIL in becoming a Cost Leader. 81.6% of the respondents in the Senior Management cadre felt that they need training on Cost Leadership themselves. 91.4% of the contractors believe that they should be paid penal charges by SAIL for delays arising out of SAIL's end. Also, more than 87.2% of the contractors are willing to pay penal charges to SAIL for delays arising out of their end. 80% sellers of

SAIL products believe that marketing of SAIL products can be better when compared to competitors. More than 74.2% of the technology partners of SAIL have pointed out that timely completion of projects is an issue that needs to be addressed at the earliest by SAIL in order to become a Cost Leader. More than 69% of the respondents from Competitor organizations of SAIL believe that there are excellent decision makers and Cost leaders in SAIL, whereas almost an equal number of people have also reported that technologically their companies are placed better than SAIL.

5. Conclusion

From the analytical research, it may be inferred that Uttam Value Steel has truly followed cost leadership strategies as it's AT ratio (=1.84) is the highest and PBIDTM also very low (=2.78), RONOA is 5.76. With this strategy that company is able to increase market share near about 87% during these periods. Again ROE (0.09) is too low that indicate pure cost leadership isn't appropriate for steel industry. On the other hand, Bhushan Steel follow pure differentiation strategy as it's AT ratio (=0.64) is lowest, PBIDTM (=26) and RONOA is 15.76, ROE is very high (=16.36) but MS growth is 42%. When we observe the result of industry leader on base of market leader then SAIL, Tata Steel, JSW steel follow mixed or hybrid strategies and they spend money on R&D expenses (R&D mean 120.50, 59.87&35.66 respectively) to develop the quality of product. Tata Steel is the company which manages cost better (PBIDTM=33.59 & COP/ NS=0.58) and is able to increase MS (=25%) during the periods and ROE (14.4) also high.

5.1. Scope for Further Research

The study has been performed analyzing six steel making companies in the Indian Steel Industry. Inclusion of more companies from India and Outside will bring out a deeper picture and lead to more holistic solutions.

Decision makers from the concerned Industry and Government offices may be brought under the purview of research through surveys and questionnaires. This would ensure better understanding of the value chain in which the steel industry operates in India.

5. References

i. Aulakh, P. S. (2000). Export strategies and performance of firms from emerging economies: Evidence from Brazil, Chile and Mexico. Academy of Management Journal (43(3)), 342-361.
ii. Bennett, R. C., & Cooper, R. G.(1979). Beyond the marketing concept. Business Horizons, June, pp.76-83.
iii. Bingxin Li, C., & Juan Li, M.(2008). Achieving superior financial performance in China: differentiation, cost leadership or both? American Marketing Association, Journal of Marketing, 3, 1-22.
iv. Buckley, P. , Pass, C., and Prescott, K. (1988). Measures of international competitiveness: a critical survey. Journal of Marketing Management,, vol 4, , 175-200.
v. Chang, S.C., Lin, N .P. & Sheu, C. (2002). Aligning manufacturing flexibility with environmental uncertainty in high-tech industry, International Journal of Production Research, 40(18), 4765-4780.
vi. Day, G., & Wensley, R. (1998). Assessing advantage: A framework for diagnosing competitive superiority. Journal of Marketing, 52, 1-20.
vii. Frambach, R. T. (2003). The Influence of Business Strategy on New Product Activity: The Role of Market Orientation. International Journal of Research in Marketing (20(4)), 377-397.
viii. Hitt, M. H. (2007). Management of strategy: Concepts and cases. Australia: Thomson/South Western.
ix. Ireland, R. H. (2011). The Management of Strategy – International Edition (9th ed.). South-Western, : Cengage Learning.
x. Kiechel, W., III. (1981a). The decline of the experience curve. Fortune, October 5, pp. 139-146.
xi. Little, P.L., Little B.L., Coffee, D. (2009) The Du Pont Model: evaluating alternative strategies in the retail industry. Academy of Strategic Management Journal. Jan 2009,vol.8, pp 71-80
xii. Miller, D. (1988). Relating porter's business strategies to environment and structure: Analysis and performance implications. Academy of Management Journal (31(2)), 280–308.
xiii. Palepu, K. & P. Healy (2008). Business analysis and valuation: Using financial statements (Fourth edition). Mason,OH: Thomson Southwestern.
xiv. Little, Philip L.; Mortimer, John W.; Keene, Marvin A.; Henderson, Linda R. (2011).Evaluating the effect of recession on retail firms'strategy using DuPont method: 2006-2009 , Journal of Finance and Accountancy; Sep2011, Vol. 7, p1
xv. Porter, M. (1980). Competitive strategy – Techniques for analyzing industries and competitors. New York: The Free Press.
xvi. Porter, M. E. (1985). Competitive Advantage: Creating and Sustaining Superior Performance. , Free Pres
xvii. Porter, M. E. (1990). The Competitive Advantage of Nations. New York: The Free Press.
xviii. Porter, M.E. (1998). Competitive advantage: Creating and sustaining superior Performance. New York, NY: Free Press.
xix. Schonberger, R. (1994). Human Resorce management lesson from a decade of tota quality management and reengineering. California Management Review (36(4)), 109-134.
xx. Schuler,R.S.& Jackson, S.E.(1987).Linking Competitive Strategies with Human Resource Management Practices. The Academy of Management Executive, 3,207-219.
xxi. Thompson, A. A. (1999). Strategic Management, Concepts and Cases (11 ed.). Boston: McGraw-Hill Irwin.
xxii. Utterback, J. &. (1975). A dynamic model of process and product innovation. Omega, 3(6), 639–656.
xxiii. Ward, P. B. (1996). Configurations of manufacturing strategy,business strategy, environment and structure. Journal of Management (22(4)),597–626.