



# The Institute of Cost Accountants of India

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## **COST COMPETITIVENESS**

October 2015. Volume II. No. III

CMA e-Magazine



*I am pleased to announce the publication of the current edition of CMA e-Magazine of the Institute on “Cost Competitiveness”, Vol. II, No. III October 2015 issue.*

*Maintaining cost records in an organized manner is the first stage for correct determination of the 'cost'. Cost reduction is considered as a pro-active means to increase profitability and enhance cash flow. The competency and performance gets evaluated and the areas of wastages, losses, inefficiencies, etc. can be identified. Cost savings have a tremendous potential, which independently brings competitiveness. Undoubtedly, gaining competitiveness is a summation of various factors and contributors, but knowing your cost properly is most important.*

*The significance of cost reduction within a company cannot be overstated. Companies that are losing money, need to raise profits, or must turn out to be more competitive and need to reduce expenses in order to succeed. Knowing how to implement effective cost reduction strategies can be the determining factor for business sustainability.*

*I sincerely appreciate the commendable attempt of the Directorate of Research & Journal of the Institute to present such an e-Magazine which the readers would love to go through and enrich their knowledge base.*

**CMA P.V. Bhattad**

*President*

*The Institute of Cost Accountants of India*



*It's a privilege to place before you the current edition of CMA e-Magazine of the Institute on "Cost Competitiveness", Vol. II, No. III October 2015 issue.*

*Creating a competitive advantage will involve understanding the needs of the customers and devising a strategy to make efficient use of the resources to set the business apart from the competition. The strategy will need to take into account the target market, the business' strengths, opportunities, threats weaknesses and aim or the target to be achieved. Framing sustainable competitive advantage rotates around discriminating a product from the competition along attributes that are significant and pertinent to customers.*

*I express appreciation for my fellow members of the Research, Journal and IT Committee, the eminent contributors and the entire research team of the Institute for their sincere effort to publish this edition on time.*

*Suggestions for improvement of this Magazine shall be highly appreciated.*

*I am confident that you will find this CMA e- Magazine, quarterly issue to be equally interesting and valuable.*

*Thank you.*

**CMA Avijit Goswami**  
*Chairman, Research, Journal & IT Committee*  
*The Institute of Cost Accountants of India*



Greetings!!!

*We are delighted to present the edition of CMA e-Magazine of the Institute on “Cost Competitiveness”, Vol. II, No. III October 2015 issue, an offering of the Directorate of Research & Journal of the Institute. It mainly highlights on case studies, interviews on cost competitiveness and innovative ideas on Cost Competitiveness and Sustainability. Inputs are mainly received both from academicians and the corporate stalwarts. This e-Magazine interlaces an affirmative image concerning cost control and competitiveness.*

*The net effect of lack of competitiveness has resulted in diminutive recovery and growth of the economy. For overcoming the problems in the economy, one crucially important objective is the containment of domestic cost developments. Keeping abreast with the changing times, the e-Magazine provides a window to the vibrant world as well as dynamic India.*

*We look forward to constructive feedback from our readers for the improvement of this CMA e-Magazine “Cost Competitiveness”. Please send your mails at [research@icmai.in](mailto:research@icmai.in). We appreciate the sincere efforts of all the contributors of this important issue and hope our readers get pleasure from it.*

**CMA (Dr.) Debaprosanna Nandy**  
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## Impact of Cost Competitiveness on E-Commerce



**Shri S K Ray**  
GM, Company Secretary  
MSTC Limited, Kolkata

**Q.** *How would you apply Cost Competitiveness to enhance Operational efficiency of your organization?*

**A.** Our organization is an e-Commerce service provider where time in delivery and cost are important factors. Competitiveness in cost is largely related to quality of delivery which is often ignored. Hence, competitiveness in cost is difficult to compare between two organizations. We justify our service charge with the quality of service which captures to authenticity, data security, transparency, fairness and accuracy.

**Q.** *In what ways Cost Competitiveness contribute towards branding of an organization?*

**A.** Cost competitiveness will contribute to branding only where the cost considers the qualitative aspect. A less

cost product/service by itself cannot have branding. However, the organization can target lower segment of customer/clients.

**Q.** *Which is the most cost-effective strategy that had sound financial impact on your organization?*

**A.** Mechanization or automation is the most effective strategy that has financial impact. It saves manpower cost as well as infrastructure cost.

**Q.** *Can cost Competitiveness boost up market share and market growth? Enrich us with your view in this regard.*

**A.** In my view, majority of the market segment, whether in product or in service, expect a Minimum Acceptable Quality (MAQ) and are ready to pay. If such standard is

maintained then there will be market growth of the product/service. In any case, cost competitiveness would result to lower cost and higher value to customers.

**Q.** *How cost competitiveness facilitates to amplify the overall competitiveness of the country and how it influences the organizational growth & sustainability of the nation?*

**A.** Reduction of cost is nothing but using the resources to its maximum potential so that the firm can compete in the market with regard to the product/service it is producing/rendering. Lesser the cost of production, lesser the price and higher the demand and the market shares grows. If all players practice the same there will be an overall reduction in cost and price and would definitely amplify the overall competitiveness. Organization will grow because of higher profit due to higher sales. There will be further investment in R&D. Low input cost would

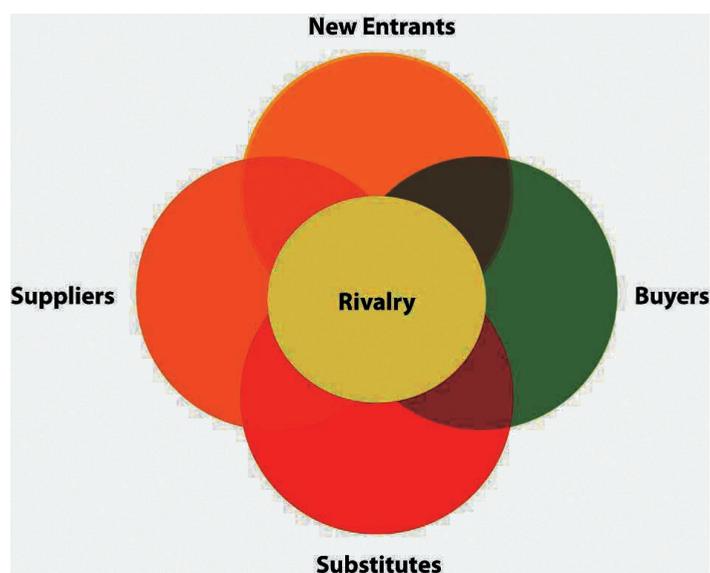
result to higher sustainability, both at micro as well as macro level.

**Q.** *What in your opinion are the key drivers to be cost competitive in the sector your organization belongs?*

**A.** Our company is into e-Commerce where technology is the key driver, both in cost effectiveness and quality of service to our clients. However, there are many small start ups who present themselves as e-Commerce service providers and their charges are pretty low. They lack quality hardware & software, quality people, certifications etc and cannot be called our competitors, once you compare the deliverables.

The question is whether you want cheaper cost competitiveness ignoring quality? This may keep you floating in the market temporarily. The second key driver is the people who should be properly compensated.

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## *Innovation and Technology: Significant arenas of Cost Competitiveness*



***CMA Kalyan Kar***

*Co-Founder & Managing Director  
IKVP Ltd., Kolkata*

### **Q.** *What determines the competitiveness of an economy?*

**A.** In the technology enabled business environment, “Faster-Better-Cheaper” will be the mantra of success. The only way to achieve this is through the eco-system of inclusiveness and innovation. In other words, the economy which has an “inclusive” focus and is “innovative” in its thought to achieve this focus can do so by effectively using technology to attain “faster-better-cheaper” results. This is extremely true for an economy like ours in India. If we can achieve inclusiveness in our approach, we can utilize the vast pool of human resources gainfully creating livelihood for all and thereby become a global economic super power, as we foresee a huge shortage of skilled man power in the days to come and India can be the global man power supplier. However, to achieve this result, we must focus on effective and consistent

policies, education and skill development, health and infrastructure.

We must not also forget that livelihood creation and inclusiveness can help 500 million people who are below the poverty line to come up the ladder and become consumers. If that happens, India’s domestic demand can spur unprecedented growth and the economy can boom.

### **Q.** *How to improve Cost Competitiveness for effective decision-making?*

**A.** “Cost” should be in the DNA of the decision makers, be it Government, Corporate or Social arena. And as mentioned earlier, “Cost” can become competitive if technology and innovation is blended. Hence, THINK “Cost” BE “Innovative” USE “Technology”. To become successful in implementing the cost measures, you also need to effectively measure the impact by

using the right set of metrics and monitor the same on a regular basis.

**Q.** *In order to obtain a fair view about the performance of the organization, how to position the cost aspect from the competitive point of view?*

**A.** Global competition today is based on the value proposition, which primarily rests on the principal of “Faster-Better-Cheaper”, as mentioned earlier. Amongst these three attributes, Cost is the most important one, however, without compromising on the quality. Thanks to the technology enable connected world, today competition is global, creating a level playing field amongst all. Hence, it is imperative that an organization continuously measures its performance creating global benchmark, comparable metrics with its competitors and regular consumer feedback. In every aspect of measurement, “Cost” is of the primary importance. Today’s consumers are extremely informed and “Value per Unit” must be competitively delivered, otherwise the competitive edge will be lost and the consumers will freely drift away to better delivering organizations.

**Q.** *How can Public-private collaboration instigate to achieve sustainable cost competitiveness?*

**A.** Public enterprises champion the social cause and can create large business opportunities through its access to infrastructure, natural resources, people and governance and private enterprises can do business effectively, efficiently and profitably. Hence, any Public Private Partnership (PPP)

Model can be very effective in large scale operations thereby leading to economies of scale with great scalability opportunities. Thus opportunities which are socially relevant and have large scalable operations naturally give way to cost effectiveness, which if rightly managed can create a very competitive cost effective business opportunity.

**Q.** *In terms of productivity, how does cost competitiveness matter with respect to your own organization?*

**A.** Globally business is now acutely competitive. Under such circumstances, if one is not cost competitive then the chance of survival is virtually nil. For our organization, cost competitiveness is of tremendous importance and continuous research and development is encouraged and practiced in making our deliveries more affordable for our clients. Constant focus and innovation on “People-Process-Technology” is the essence of our business strategy and it of highest importance in any business decision, without compromising on quality of delivery

**Q.** *In order to obtain a fair view about the performance of the organization, how to position the cost aspect from the competitive point of view?*

**A.** Cost competitiveness is of primary importance and ranks # 1 in our business strategies with a clear focus on retaining quality. Very often, cost is compromised with quality but in modern business world this is not acceptable. We regularly measure our cost competitiveness and have a number of metrics designed to effectively quantify the “Value” delivered to

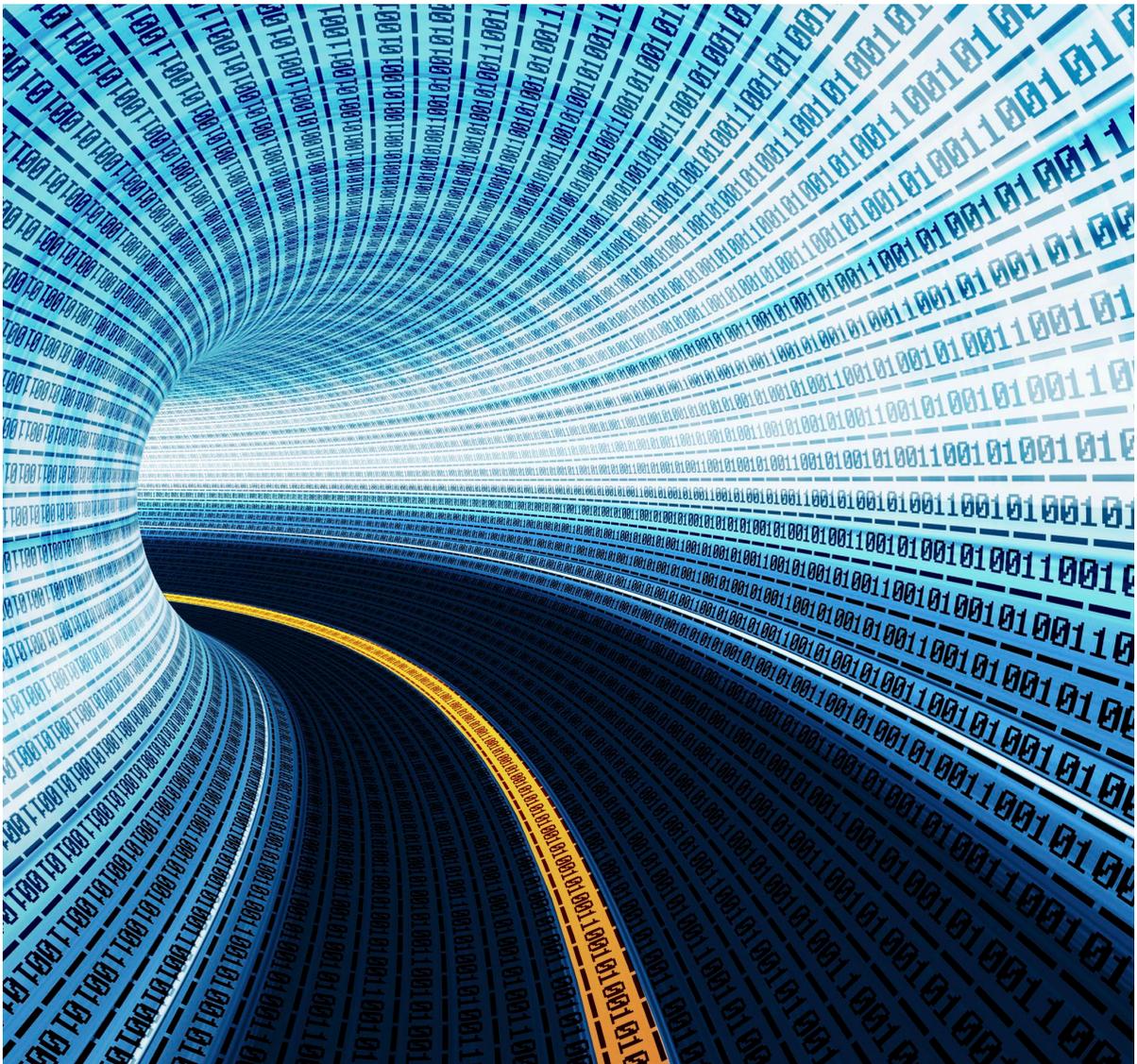
our customers vis-à-vis the “Cost” incurred by them benchmarking the same against our competitors and the industry at large.

**Q.** *What policy an organization should take to differentiate its products and/or services from that of its close competitors?*

**A.** Technology enabled innovative low cost value added solutions, which are

sustainable and scalable. If one can achieve this goal then it will score over its customers for sure. However, to be a great organization the Company has to constantly feed itself with Customer Feedback and alter its course and strategy accordingly.

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# ***Does Employee Cost Competitiveness Contribute To Above Average Performance?***

## ***A Case Study in Petro-Chemical Sector in India***

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### **Introduction**

It is a common view in the extant literature that competitive advantage is expected to be reflected in above average productivity, profitability and gross value addition. Cost advantage (cost leadership/cost competitiveness) is identified as one major component of competitive advantage (Porter, 1980), while employee cost competitiveness happens to be one of the prime constituents of cost competitiveness. Accordingly, we contend that employee cost competitiveness contributes to above average performance reflected through higher profitability and higher gross value addition. In this paper we present a case study of six firms in Chemical & Petro-chemical Process Industry over a period of six years. We have taken employee cost competitiveness as one variable and select other two relevant variables for the study, viz., profitability of investment and gross value addition. In respect of each of the variables the study measures their growth over time for a company and finds the relative position of each company in the peer group. It further

examines the relationship of profitability of investment and gross value addition with employee cost competitiveness.

### **Concept**

Here follows a discussion made on the concept about the variables taken in the study.

Employee cost competitiveness is usually indicated by the employee cost per unit of production. In this study we have taken the proportion of employee cost to total revenue as proxy for the employee cost competitiveness. However, the proportion is multiplied by (-) 1 and 1 is added so as to make the number favourably related to competitiveness (higher competitiveness is reflected through higher number).

Profitability is measured with respect to capital. Specifically, the Return On Capital Employed, i. e., Profit After Tax (PAT)/Capital Employed (CE) has been taken in the study to represent overall profitability of capital. The Gross Value Added (GVA) is the Value Added Income (VAI), i. e., sum total of income

available to employees as compensation, income to government/society as taxes, income to debt capital providers as financial expenses and income to shareholders/owners as Earnings/Profit After Tax. GVA is scaled by

Capital Employed to measure Value Added Income Generation Ability (VAIGA).

## Objectives

Objectives of the study are enumerated below.

1. To measure Employee Cost Competitiveness (ECC), Overall Profitability of Capital (ROCE), and Value Added Income Generation Ability (VAIGA) in order to find their over the time growth and across the firms positioning.
2. To find how ROCE, and VAIGA are affected by ECC.
3. Finally, to add insight into the existing debate on effectiveness of labour cost leadership.

## Research Design

### Sources of Data

The selection of the six firms belonging to the Chemical & Petro-chemical Process Industry & eight leading firms belonging to the fertilizer industry comprising public, private and cooperative forms of organization under the manufacturing sector is basically made on the closeness of their nature of business, their leading performance in this sector both in terms of turnover and size. The database of Centre for Monitoring Indian Economy Private Limited (CMIE) of the detailed performance report of Indian firms in the form of software PROWESS 3 and 4 are used as the source of performance data of the respective organizations.

The six firms under consideration for the study consist of both public and private enterprises (Table 1) and data analysis for the period of 2009-2014 has been made to address the research objectives.

**Table 1: Six Firms of Chemical and Petro chemical Sector under investigation**

Public Enterprises	<ul style="list-style-type: none"> <li>• Indian Oil Corporation Limited (IOCL)</li> <li>• Bharat Petroleum Corporation Limited (BPCL)</li> <li>• Hindustan Petroleum Corporation Limited (HPCL)</li> </ul>
Private Enterprises	<ul style="list-style-type: none"> <li>• Castrol India Limited</li> <li>• Gulf Oil Corporation Limited</li> <li>• Reliance Industries Limited</li> </ul>

## Methodology

Three variables taken for the study and their detailed estimation are given in Table 2.

**Table 2: Details of Three Variables and their estimation**

I. Employee Cost Competitiveness	Employee Cost Competitiveness (Unadjusted) = Employee Cost/ Sales Revenue. As a lower proportion implies higher competitiveness, the (adjusted) Employee Cost Competitiveness is developed by change of origin and scale as $\{(\text{Employee Cost/Sales Revenue}) \times (-)1 + 1\}$ so that higher number indicates higher competitiveness.  Thus, Employee Cost Competitiveness = $\{(\text{Employee Cost/Sales Revenue}) \times (-)1 + 1\}$
II. Income Generation Ability	Value Added Income Generation Ability = [Value Added Income*] / Capital Employed  * Value added Income = [PAT+Interest Expenses+Employees Cost+Direct Tax+Indirect Tax]
III. Return of Capital Employed(ROCE)	Not computed. Directly taken from the company financial data.

### Methods of analysis

The estimation of all three variables has been measured for the period of six years for each firm. Their over the time growth has been computed and shown graphically. The averages of the measured values for the identified variables are used for comparison across the firms and presented graphically. Regression analysis is used to measure the extent of association of the identified variables.

### Data Analysis and Research Findings

*Empirical analysis has been made in two stages corresponding to each of the first two objectives.*

#### *Stage I: Measure of Three Variables*

Values for each variable are computed for all the six firms and for all the six years. Their tabular presentation is made below.

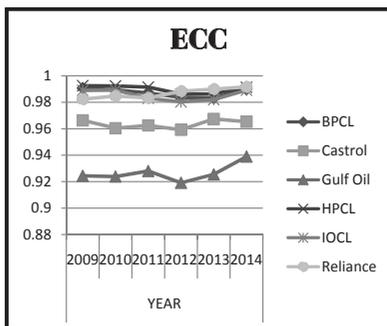
Case I Estimation of Employee Cost Competitiveness (ECC)

**Table 3: Estimation of Employee Cost Competitiveness of Select Six Firms**

Year	BPCL	Castrol	Gulf Oil	HPCL	IOCL	Reliance
2009	0.9907	0.9663	0.9244	0.9925	0.989	0.9823
2010	0.9893	0.9604	0.9238	0.9923	0.9892	0.9848
2011	0.987	0.9625	0.928	0.9914	0.983	0.9833
2012	0.9837	0.9592	0.9191	0.9861	0.9803	0.9883

Year	BPCL	Castrol	Gulf Oil	HPCL	IOCL	Reliance
2013	0.9831	0.9674	0.9255	0.9862	0.982	0.9899
2014	0.9898	0.9653	0.9389	0.9913	0.9892	0.9916
AVERAGE	0.9873	0.9635	0.9266	0.99	0.9855	0.9867
CAGR	-0.015%	-0.017%	0.25%	-0.02%	0.003%	0.15%

**Fig 1: Employee Cost Competitiveness (ECC) of Select Six Firms over the period 2009-2014**

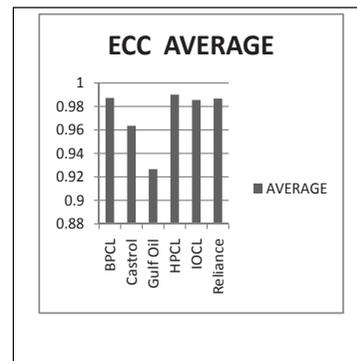


Source: Calculated from the data sourced from Financial Performance of Organizations (Prowess Database of CMIE)

We observe from the above table and the Figure 1 and Figure 2 that for each company ECC do not show any recognizable fluctuations

over the years. However, based on average ECC, in cross-section analysis we find HPCL to be the cost leader, closely followed by BPCL, Reliance and IOCL. Gulf Oil appears as the least competitive firm in the group.

**Fig 2: Average Employee Cost Competitiveness (ECC) of Select Six firms**

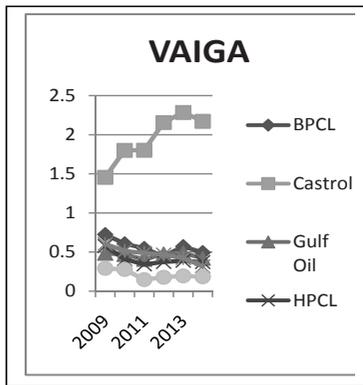


## Case II Estimation of Value Added Income Generation Ability (VAIGA)

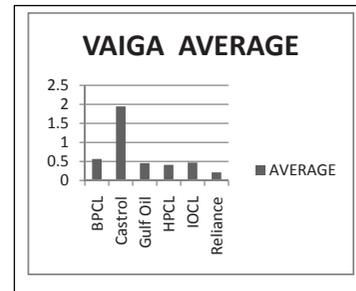
**Table 4: Estimation of Value Added Income Generation Ability (VAIGA) of Select Six**

Year	BPCL	Castrol	Gulf Oil	HPCL	IOCL	Reliance
2009	0.7237	1.4553	0.4838	0.5766	0.6038	0.2914
2010	0.606	1.8008	0.4687	0.4087	0.5137	0.2759
2011	0.5471	1.8017	0.4059	0.3422	0.4884	0.1473
2012	0.4456	2.1561	0.4746	0.3738	0.4676	0.1772
2013	0.5698	2.285	0.4895	0.3886	0.4216	0.1944
2014	0.4932	2.1718	0.4196	0.3719	0.3182	0.1824
AVERAGE	0.5642	1.9451	0.457	0.4103	0.4689	0.2114
CAGR	-6.191%	6.90%	-2.345%	-7.048%	-10.125%	-7.511%

**Fig 3: Value Added Income Generation Ability (VAIGA) of Select Six Firms over the period 2009-2014**



**Fig 4: Average Value Added Income Generation Ability (VAIGA) of Select Six firms**



Source: Calculated from the data sourced from Financial Performance of Organizations (Prowess Database of CMIE)

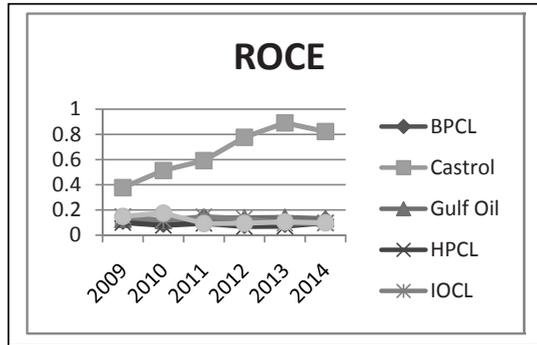
In gross value addition (VAIGA), except Castrol all other firms show a declining trend. On the basis of averages, Castrol tops the list and, interestingly Reliance, close to topper in employee cost competitiveness occupies the last place.

### Case III Measure of Return of Capital Employed (ROCE)

**Table 5: Estimation of ROCE of Select Six Firms**

Year	BPCL	Castrol	Gulf Oil	HPCL	IOCL	Reliance
2009	0.1128	0.3772	0.1261	0.1001	0.1488	0.1498
2010	0.0884	0.5132	0.1169	0.0769	0.1183	0.1758
2011	0.1418	0.5917	0.1385	0.0938	0.1464	0.0931
2012	0.0785	0.7768	0.1379	0.0688	0.1318	0.0955
2013	0.0872	0.8915	0.1416	0.071	0.0946	0.1058
2014	0.1233	0.8227	0.1322	0.0976	0.0962	0.0988
AVERAGE	0.1053	0.6622	0.1322	0.0847	0.1227	0.1198
CAGR	1.494%	13.879%	0.790%	-0.421%	-7.012%	-6.701%

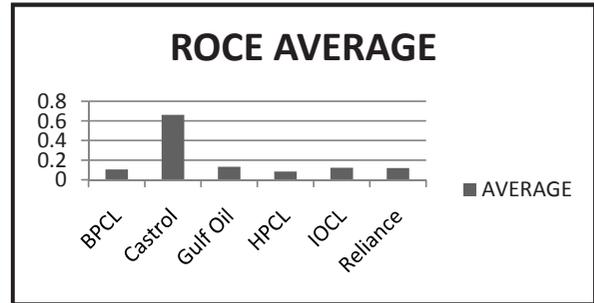
**Fig 5: Return of Capital Employed (ROCE) of Select Six Firms over the period 2009-2014**



*Source: Calculated from the data sourced from Financial Performance of Organizations (Prowess Database of CMIE)*

On profitability also Castrol shows a rising trend while others are mostly declining. On

**Fig 6: Average Return of Capital Employed (ROCE) of Select Six firms average profitability,**



again Castor is the leader followed by Gulf Oil and IOCL and Reliance, BPCL and HPCL are in the last three. Next, Ranks are assigned to each firm on the basis of the average value for each parameter and the summarized results are presented in the following table:

**Table 6: Ranks of all the firms on the basis of average value for each parameter**

Parameter	Bharat Petroleum Corpn. Ltd.	Castrol India Ltd.	Gulf Oil Corpn. Ltd.	Hindustan Petroleum Corpn. Ltd.	Indi-an Oil Corpn. Ltd.	Reliance Industries Ltd.
Employee Cost Competitiveness (ECC) [Cost leader is ranked 1]	Rank 2	Rank 5	Rank 6	Rank 1	Rank 4	Rank 3
Value Added Income Generation Ability (VAIGA)	Rank 2	Rank 1	Rank 4	Rank 5	Rank 3	Rank 6
Return on Capital Employed(ROCE)	Rank 5	Rank 1	Rank 2	Rank 6	Rank 3	Rank 4

In regard the relation of employee cost competitiveness with profitability and gross value addition it is observed that Hindustan Petroleum Corpn. Ltd. ranking first in employee cost competitiveness has the last rank in ROCE and last but one rank in value added income generation ability. Castrol India Ltd. ranking fifth in employee cost competitiveness is first in both ROCE and value added income generation ability. More all less all the ranks follow this inverse relation.

Thus, the inter-firm comparison makes one distinct revelation that employee cost competitiveness in many instances does not result in higher gross value addition and higher profitability.

### **Analysis Stage II:**

To measure by what extent Return on Capital Employed (ROCE), and Value Added Income Generation Ability (VAIGA) are affected by Employee Cost Competitiveness (ECC)

Regression analysis has been performed individually considering Return on Capital Employed (ROCE), and Value Added Income Generation Ability (VAIGA) as dependent variables and Employee Cost Competitiveness (ECC) as independent variable. The summarized results are given in Table 7.

The mathematical model of regression analysis can be expressed as follows:

$$\text{ROCE/VAIGA} = \hat{\beta}_0 + \hat{\beta}_1 \text{ECC} \dots\dots\dots(1)$$

Where ECC =Employee Cost Competitiveness

$\hat{\beta}_1$  = Co-efficient associated with independent variables ROCE/VAIGA respectively

**Table 7: Summarized Results of Coefficients of independent variables**

	<b>Constant</b>	<b>Coefficients</b>
Return on Capital Employed (ROCE)	0.377	-0.0027*** (0.001)
Value Added Income Generation Ability (VAIGA)	1.120	-0.0069*** (0.002)

*The table shows regression results based on equation (1). The figures in the brackets indicate the standard error. \*\*\* indicates significance 1 percent level respectively.*

Our point of interest is the sign and significance of the coefficient of the independent variable. Profitability and gross value addition (ROCE and VAIGA) are negatively affected by employee cost competitiveness. The relation is statistically significant.

### **Concluding Observations**

In the Petro-Chemical Sector in India over a period of six years there is negligible growth in employee cost competitiveness. Castrol has taken leadership in gross value addition and return on capital employed in spite of the fact that it ranked fifth in employee cost competitiveness.

Thus, employee cost competitiveness seems not to reflect in performance of a firm in terms of gross value addition and profitability. This is in consistency with an observation made in Harvard Business Review, “..when it comes to wages and benefits, a cost-leadership strategy need not be a race to the bottom.”(Cascio, 2006)<sup>2</sup> What apparently reduces employee cost competitiveness may have some offsetting effect to raise overall performance in terms of gross value addition and profitability.

The regression results further support the same relation between employee cost competitiveness and firm performance. Both gross value addition and profitability are negatively influenced by employee cost competitiveness.

As the empirical results suggest, we may conclude that the employee cost competitiveness is not supposed to have positive contribution to above average performance of a firm in Petro-Chemical Sector in India.

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# **Mittal Steel – A Success Story of Turnarounds and Cost Competitiveness**

**CMA (Dr.) Subhash Chandra Das**

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***“Our strategy is to be a low-cost, high margin, high quality producer on a global basis. With this in mind we will continue to remain vigilant in terms of growth opportunities. ....Our aim is to become the world’s most admired steel institution and therefore we must excel in every area and every aspect of our business.”***

**- Lakshmi Niwas Mittal, Chairman and CEO, Mittal Steel**

## **Abstract**

Mittal Steel (renamed as Arcelor Mittal after merger with Arcelor) is the largest steel producer in the world. It has marketed 42.1 million tonnes of steel and earned revenues worth USD 28 billion in 2005. Its operating income and net income has been USD 4.7 billion and USD 3.4 billion respectively in 2005. It has operations in 14 countries across four continents. Its production capacity was increased from 20 million tonnes in 2002 to 70 million tonnes in 2005. Its main products are flat steel products, coated steel, tubes and pipes. The number of employees working in this group is 320000. All these milestones have been achieved due to Mittal’s successful business strategies, cost reduction measures and knowledge management.

*In this article author attempts to present a case study and narrates a success story of Mittal Steel’s business strategy on turnarounds, cost competitiveness and knowledge management.*

Lakshi Niwas Mittal (LNM) started a rod mill in Indonesia in 1976. Mittal Steel was formed as Ispat International in 1978 It is a public limited company although Mittal family owns 88% of its shares. The family is known for its steel business more than 60 years when Mohan Mittal, father of LNM started a scrap metal business and gradually built that as one of the leading steel plant in the name of Ispat Industries in India. In 1995, Mittal Steel separated from Ispat Industries following disagreements with his father.

Since late 1980s LNM acquired many steel plants across the globe and turned them around. In 1989 Mittal Steel took over on lease and later on in 1994 acquired *Caribbean Ispat* from the Government of Trinidad and Tobago. In 1992, the company acquired *Sibalsa*. In 1994, the company acquired *Sidbec-Dosco*. In 1995, the company acquired *Hamburger Stahlwerke*, which formed *Ispat International Ltd.* and *Ispat Shipping*, and also bought *Karmet Steel* of Temirtau, Kazakhstan. In 1997, the company acquired *Walzdraht Hochfeld GmbH* and *Stahlwerk Ruhrort*. In 1997, the company went public as *Ispat International NV*. In 1998, the company acquired *Inland Steel Company*. In 1999, the company acquired *Unimétal*. In 2001, the company acquired *ALFASID* and *Sidex*. In 2002, it bought a majority stake in *Iscor*. In 2003, the company acquired *Nowa Huta*. In 2004, the company acquired *Polskie Huty Stali*, *BH Steel*, and certain Macedonian facilities from *Balkan Steel*. In 2005, the company acquired *International Steel Group*. In the same year, the company acquired *Kryvorizhstal*.

In 2005, Mittal Steel announced an investment of USD 9 billion in Jharkhand, *India*. In 2006, the company merged with *Arcelor* (renamed as *Arcelor Mittal*) after much controversy and announced investment for a 12 million tonne capacity steel plant in *Odisha*, *India*.

LNM's turnaround model is simple. He buys a sick company, puts it to a team of his own efficient managers, usually old executives from *SAIL* and from his acquired company, focuses main attention on financial and marketing side, makes fresh capital investments for augmentation of production capacity and quality, cuts costs relentlessly and injects knowledge management programme into the company.

As mentioned before, LNM's acquisitions of companies are followed by vigorous cost control measures in order to reduce operating costs and ensure cost competitiveness to win over in marketing. The costs are mainly

controlled by using low cost raw materials such as *DRI* and producing steel through the *DRI-electric arc furnace continuous casting* method. Use of *DRI* as raw material in place of steel scrap has reduced input costs for the plants substantially. In 1996, for example, the cost of *DRI* was USD 95 per tonne as compared to USD 155 per tonne of steel scrap and USD 125 per tonne of pig iron. In 1998 Mittal Steel became the largest producer and user of *DRI* in the world, thereby recognised as one of the lowest cost steel producers in the world.

Mittal has also been successful in reducing the costs in the acquired mills by down-sizing the workforce. In 1988 at *Ispat Inland (USA)*, the salaried workforce was laid off by 17% which resulted a saving of USD 22 million per annum.

With a view to reducing the procurement costs of plant materials, LNM redirects purchases of all plants to Europe. The purchase orders of the entire group are placed from a common base located in Europe. Therefore, the bulk orders for global requirements has benefitted Mittal in achieving large scale economy in procurement as also better bargaining capacity from the suppliers. Besides, the average fixed costs at 28% of the total costs in the year 2000 came down to 20% in 2005. In Mexico plant, the fixed cost was reduced to the extent of 8%.

Mittal steel has a proven record in successful turning around the sick mills in various countries using their own resources and expertise, assisted by the company's proven knowledge integration programme. The *Knowledge Management Programme (KMP)* was introduced in all Mittal's mills in the mid-1990s. The programme uses the depth and breadth of knowledge within the group and ensures that the systems are in place for sharing it in order keep improving the organisations. Mittal steel is using best practice of knowledge sharing to improve

productivity and efficiency throughout its global network of steel plants.

LNM believes that a common way to share ideas is through a continual programme of face-to-face meetings between employees groups facing similar technical challenges, supplemented by exchange of information through video-conferences and the internet. KMP brings together specialists in different steelmaking disciplines from all the steel plants under the group. The key to success of Mittal Steel is the exchange and implementation of best practices, experience and knowledge by the group companies. The company has chosen 25 activities which include all manufacturing processes as well as finance, maintenance, purchasing, legal activities, personnel and information technology. All these activities have to follow their respective KMP. In fact KMP has provided Mittal a competitive advantage over other steel manufacturing companies.

In the above back ground, let us understand how Mittal Steel made the turnarounds and cost competitiveness a success in some of its subsidiary companies acquired by it.

### **Caribbean Ispat (Trinidad and Tobago)**

The Government of Trinidad and Tobago established a steel plant “Iscott Plant” in 1980 with a capacity of 1940000 TPA for production of direct-reduced iron (DRI), steel billets and wire rods. But the plant soon went into losses due to deep recession of world economy and restriction of steel imports by the US Government. Despite various efforts taken to revive the situation, the accumulated losses of the plant were mounting.

In the year 1989, Mittal took over the plant on lease under its new name Caribbean Ispat Ltd. (CIL) at USD 11 million a year from the Government of Trinidad and Tobago. Mittal invested USD 10 million in modernising the

plant. A 62 member team of steel experts were brought from various countries to modernise the operations. He also invested USD 60 million between 1989 and 1994 in order to enable CIL to achieve its full capacity utilisation. With a view to reducing production costs and bringing cost competitiveness substantially, the proportion of DRI, being much cheaper than the traditional raw materials, was increased to 95% of the total raw material inputs. Besides, the product mix was changed thereby increasing substantially the proportion of higher value products viz. high carbon steel, electric grade steel, etc. CIL started making net profit from its first year of operation after adjustment of lease rent.

In 1994, Mittal purchased CIL at a much lower price (USD 101 million) from the Government of Trinidad and Tobago.

### **Ispat Maxicana (Mexico)**

The Government of Mexico set up a steel mill “Siblsa” in 1980 at a cost of USD 2.2 billion. This plant was losing heavily every year due to various reasons including very low capacity utilisation. In the year 1992, Mittal acquired the mill (renamed as Ispat Maxicana) at a purchase price of USD 220 million. The old management of the plant was replaced by new managers brought from different countries to run the plant. Within 4 years of its acquisition, the production of DRI and finished steel was raised to 2.3 million TPA and 2.5 million TPA respectively which was much higher than the plant’s rated capacity. With the rise in production, the production costs were reduced by more than USD 85 per tonne. Since 1998, Ispat Maxicana started generating profit of more than USD 250 million per annum.

### **Ispat Karmet (Kazakhstan)**

In 1995 Mittal purchased another steel mill “Kamet” in Kazakhstan (renamed as Ispat Kamet) at a cost of USD 400 million. As there was an agreement to retain 70000 workers at

the time of purchase, Mittal had to search for other means to cut costs in order to remain competitive in the market. A loan of USD 700 million was taken from the World Bank and European Bank for Reconstruction and Development and invested for modernisation and development of the plant. This resulted in a reduction of its operating costs from USD 268 per tonne to USD 114 per tonne.

Besides, Mittal changed its revenue model by scrapping the barter system of exports to ex-Soviet Union and entering into cash transactions of exports to various countries including erstwhile countries under Soviet Union. With all these strategies Ispat Kamet earned profits for the first time in 1996 amounting to USD 45 million. Within 1998 the plant accounted for 7% of the GDP of Kazakhstan and became the largest private employer.

### Ispat Inland (USA)

The largest acquisition of steel plant was "Inland Steel Co." in the USA when Mittal acquired the company (renamed as Ispat Inland) for USD 1.43 billion in 1998. A debt of USD 1.1 billion was raised to finance the acquisition.

In the pre-acquisition period, the total operating costs of the mill was USD 2.6

billion per annum which was brought down substantially during post-acquisition period by introducing new management techniques through various ways. Besides, the non-union white-collar workforce was reduced by 17%, thereby saving USD 22 million per annum for the company. Moreover, the cost of procurement was reduced by USD 35 million per annum through centralised purchasing system. All these resulted a reduction of production costs by USD 12 per tonne of steel for the mill. The total output of the plant was increased to 6.5 million tonnes at much cheaper cost by using DRI and semi-finished slabs brought from Ispat Mexicana.

We conclude the case study by quoting a statement made by Mittal Steel, *"In this way we achieve the best operating practices in all disciplines. This has led to lower consumption costs and improved processes and systems, assuring our customers high standards of repeatable quality. Our employee productivity per tonne is among the highest in the world, an achievement of which we are very proud"*.

### References

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# Be Innovative Be Cost Competitive

## ***Strategic Alliances: Surmounting hurdles to Cost Competitiveness & Sustainability***

### ***Backdrop:***

Competitive advantages can be achieved by businesses that look for strategic alliances with other businesses in related industries or within the same industry. Strategic alliances are more along the lines of joint ventures that businesses use to pool resources and gain themselves exposure at the cost of other competitors not in the alliance. Joint ventures and strategic alliances force companies to share revenues and profits, but they also share the risk of loss and failure. Thus, the popularity of the cooperative strategies increases as projected risk increases, because joint ventures allow firms to take on projects that are otherwise too risky or too costly.

### ***Objectives:***

- Access to unfamiliar or untapped markets,
- Risk sharing
- Economies of scale
- Shared technology
- Decreased costs
- Cooperative strategies also allow small companies to join together to compete against an industry giant

### ***Methodology:***

For executives facing mounting competition in global markets, strategic alliances offer a promise of dramatic improvements in

competitive position. Economies of scale can be achieved when two or more firms pool their resources together, maximizing efficiency based on the project's needs. Companies of different sizes may also benefit from joining together. The large company offers its capital and resources in exchange for the efficiencies or innovations found at the smaller company. When companies from developed countries cooperate with companies in less developed countries, they usually realize huge cost savings by seeking cheaper labour and untapped reserves of material. The company from the less developed country benefits from advanced technology and increased access to capital. Both companies benefit from the cooperative alliance.

### ***Applicability:***

Apple successfully collaborated with Sony to develop the PowerBook notebook computer. The Japanese Company's miniaturization expertise enabled Apple to reduce PowerBook's size and shorten its development time. Apple paired with IBM and longtime supplier Motorola to develop *Reduced Instruction Set Computing* (RISC) -based Macintosh products and a new open-systems platform. Alliances are almost always the fastest and most cost-effective way to gain technological competence. Successful technology alliances identify risks and sources of conflict at the outset and work to contain them.

## Be Innovative Be Cost Competitive

### *Lean & Green move towards Cost Competitiveness and Ecological Sustainability*

#### **Backdrop:**

Lean and green is not only a trendy subject, but they also make good business sense, especially for manufacturers. Green is a sustainability issue and Lean is a critical operational strategy. When applied together to an organization, it creates a synergizing effect. Lean streamlines business processes, improves teamwork, enhances productivity and increases efficiency; while Green helps to improve the environment for self and fellow citizens, elevates us to a socially responsible enterprise, helps reduce costs as well as enhances corporate image.

#### **Objectives:**

- Waste minimization and recycling of waste
- Pollution prevention
- Lean typically results in less material use, less scrap, reduced water and energy use, and decreases number and amount of chemicals used
- Lean provides an excellent platform for broadening companies definition of waste to address environmental risks and product life cycle considerations

#### **Methodology:**

An important way to reduce waste is by eliminating or reducing scrap. Working

with engineering and the production staff to design tools or jigs that ensure accurate assembly or machining. Changing the process to eliminate wastages will save money, improve quality and create a happier workforce. It will also be greener because it associates less exploitation of energy and resources as well as unnecessary rework. In addition, one must align the entire organization behind the goal of becoming a lean and green manufacturer. Everything from the compensation plan to the production plan must fit together in ways that promote efficient utilization of energy, water and raw materials. Small steps add up to big savings in costs for the company and in cleaner, more abundant resources for the world.

#### **Applicability:**

Recycling and re-using packaging and shipping materials can make an organization leaner and greener. One can save money on packaging while saving the environment with efficient use of packing materials. Offering customers a rebate, if they return packaging materials such as pallets and using energy-efficient packing materials made from renewable resources. Recycle more than scrapping metal, printer paper and soda cans. Further, initiation of innovative ways to re-use existing materials can bring cost competitiveness and ecological sustainability.

# Be Innovative Be Cost Competitive

## *Value Engineering: A Tool that can Reduce Cost if applied for Recyclable Thermoset Polymers*

### **Backdrop:**

Plastics are divided into thermoplastics and thermoset plastics. Due to the durability, thermoset plastics are a vital part of our modern world, and are used in everything from mobile phones and circuit boards to the aerospace industry. But the same characteristics that have made them essential in modern manufacturing also make them impossible to recycle. As a result, most thermoset polymers end up as landfill. This innovation – if widely deployed with cost reduction technique such as Value Engineering would aim to reduction of landfill wastes.

### **Objectives:**

- Recyclability
- Environmental Sustainability
- Relatively low Cost
- Increasing profits
- Improving quality
- Expanding market share
- Effective utilization of resources

### **Methodology:**

In 2014 critical advances were made in this area, with the publication of a landmark paper in the journal Science announcing the discovery of new classes of thermosetting polymers that are recyclable called poly(hexahydrotriazine)s, or PHTs, these can be dissolved in strong acid, breaking apart the polymer chains into component monomers that can then be reassembled into new products. Like traditional unrecyclable thermosets, these new structures are rigid, resistant to heat and tough, with the same potential applications as their unrecyclable forerunners.

### **Applicability:**

The value engineering is a powerful problem-solving tool that can reduce costs while maintaining or improving performance and quality requirements. It can increase customer satisfaction and add value to an organization's investment in any business or economic setting. This methodology helps organizations compete more effectively in local, national and international markets. If applied judiciously, Value Engineering easily produces savings of 30 percent of the estimated cost for manufacturing a product.

## Be Innovative Be Cost Competitive

### ***Benchmarking: A technique towards Quality Improvement in Health***

#### ***Backdrop:***

Benchmarking is a management approach for implementing best practices at an effective cost. It is a fresh concept instigated in the healthcare system. Conditions for successful benchmarking focus essentially on careful preparation of the process, monitoring of the relevant indicators, staff involvement and inter-organizational coordination. The basic principle of benchmarking consists of identifying a point of comparison, called the benchmark, against which everything else can be compared.

#### ***Objectives:***

- Continuous quality improvement
- Cost effective
- Control healthcare costs
- Performance Management
- Improvement in patient service

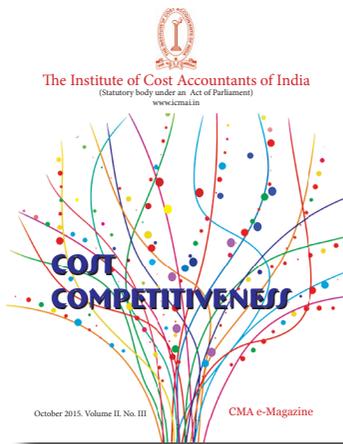
#### ***Methodology:***

In the recent years, the demand for performance has become a major issue for the healthcare system. This is due to

three factors: importance of controlling healthcare costs; risk management and quality care; and the need to satisfy patients' expectations. These demands have spurred the development of many national and international projects for indicator development and comparison. The term "benchmarking" emerged within the context of this comparison process. It also involves comparing one's firm performance on a set of quantifiable parameters of strategic significance against that of firms' known to have achieved finest performance on those indicators.

#### ***Applicability:***

Compared to methods previously implemented in France, benchmarking has specific features that set it apart as a healthcare innovation. This is especially true for healthcare or medical-social organizations. Advancement of benchmarks is an iterative and continuing procedure that is likely to involve sharing information with other organizations working with them towards an agreeable metrology. Thus, this approach will need to be assessed for feasibility and acceptability before it is more widely promoted.



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