
Strategy Formulation through Benchmarking and Economic Ranking- An analysis on Selected Companies of Indian Cement Industry

Mr. Arya Kumar*

Abstract

Evaluation of performances for any organisation is a key element to set a strategic goal. Benchmarking is considered as one of the strategic performance tools for evaluation. Conducting self-performance evaluation, making a comparison with the top performer, focusing on differences and finally putting a sincere effort to excel the benchmarking philosophy. The growth of any industry or sector is depended on the better performance of individual firms that can be identified through benchmarking. The present paper tried to identify the individual performance of cement industries and present their performance from different angles and rank them through various economic ranges. This analysis will make them to know their actual level of performance by comparing with all leading cement companies. Addition to it for the development of the industry few suggestions is given to the market player of Indian cement industry that will help for the formulation of strategy which in turn excel the total industry in future.

Keywords:

Benchmarking;

Economic ranking;

Cement industry;

Correlation coefficient;

Strategy formulation

Copyright © 201x International Journals of Multidisciplinary Research Academy. All rights reserved.

Author correspondence:

Ph.D. Research Scholar, Faculty of Management Sciences,

Siksha 'O' Anusandhan

(Deemed to be University), Bhubaneswar, Odisha.

E-Mail: aryantrpathy@yahoo.com, phone: 9853422575

1. Introduction

The companies considering various strength, weakness, opportunity and threats defines its Objectives, goals, mission statement and vision statement. To achieve the desired goal or result by using optimum resources, the company apply best management tools and right strategy for performance evaluation. In recent trend of high competition, various strategy for performance evaluation are considered like; benchmarking, Activity Based Management, Value Chain Analysis, Lean Management, Life Cycle Costing, Target Costing and Business Process Re-Engineering to measure the high degree of efficacy. As a player in the industry the company measures various financial and non-financial tools like product leadership, customer base and etc. the outcome will be compared with the competitors of same industry. When a list is prepared containing the company's performance such list is called as economic ranking. This list will reflect the position of the company and useful to assess the weakness and strength in particular field. In case it is observed the rank is one of the indicators of economic, then it will be termed as benchmark. Then rest of the

companies of same industry will compare with benchmark in respect to their performance to analyse the deficiency and gap. Finally, this gap and deficiency can be overcome through strategy formulations. A win-win strategy can be observed from here. If all the companies will follow same strategy then a growth in individual form and in the sector can be observed. Thus the economic ranking brings a positive change in the performances of all the companies in the industry.

Lastly, this growth of all the sector will support the nation's growth in large. In this paper the companies are selected from the cement industry of India. An attempt is undertaken to measure the gap in the level of performances of all the companies by the way of strategy i.e. benchmarking and economic ranking.

Benchmarking set following Question:

- What is our level of performance?
- How to achieve it?
- What is the performance level of others?
- How they achieved that?
- How to use benchmarking strategy creatively to reach the target?

Benchmarking- The Management Concepts

A practice to try and learn by getting humble to accept that someone is really doing well so as to follow them to match and surpass them at it-*American Productivity and quality Centre (1988)*. Benchmark: a measurement standard taken into grant for comparison that will be best-in-class, as a level for performance recognition for a specific practice. Rank Xerox- considering the leaders of the industry as a tool for evaluation through comparison to identify the business and work process that states "best practitioner and implement the rational goals for performance".

Benchmarking and Economic Ranking: The Genesis

Each company now a days compare themselves with other top rated performer of same industry to analyse the best practices in the industry which is known as benchmarking. Hence benchmarking is a systematic approach that can measure organisation in respect to best performer in the industry.

The formalised attempt for comparing and evaluating the product and services or the process of organisation that will help for sustainable growth of the firm in long run.

Purpose of Benchmarking Strategy:

- Setting aggressive and realistic goals.
- A self-challenge internally to what extend they can perform.
- Measure the advanced process or methods processes
- Discovery of organisational strength
- Following the leaders and learning from them

Benchmarking Types-

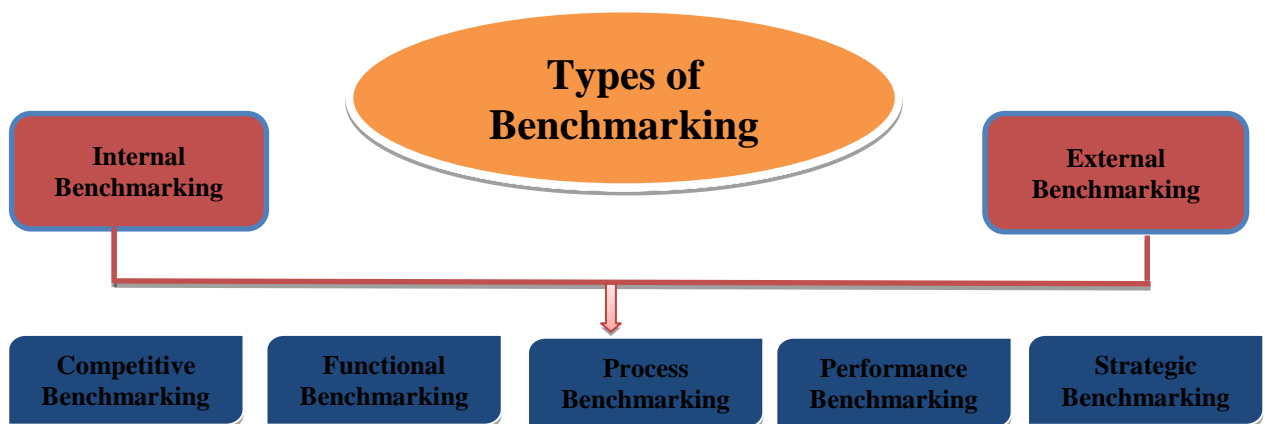


Fig-1: Benchmarking types

- Competitive Benchmarking: Across each functions the comparison between the firms of same industry.

- Functional Benchmarking: irrespective of firms the comparison is to be made between the functions.
- Performance Benchmark: to identify and compare the overall performances the KPI (Key Performance Indicator) and CSF (Critical Success Factor) will be compared with each firm.
- Process Benchmark: procedures, methods and techniques are compared.
- Strategic Benchmarking: for considering the main function the comparison is to be made between the best practices and technology.

Benchmarking Steps:

The process of benchmarking is clustered in three sub heads which contains a total of ten steps.

- A. Planning and organisation
 - i. Indicators of benchmarking are to be identified in respect to sales and customer service, output, productivity, quality, process, cost, etc.
 - ii. Position identification of best performing competitor through economic ranking
 - iii. Data is to be collected for comparison to identify best practices.
 - iv. Identifying and comparing the benchmarking result for the deficiency and gap.
 - v. Setting of result to improve the level of performances.
- B. Formulation of strategy for functional goals and action plans.
 - vi. Confirmation of functional goals, informing the achievable targets that will be segregated among all functional goals towards high level of performance for the organisation.
 - vii. Preparation of plans of action for every level of functions like marketing, quality control, production, procurement, supply chain, finance, inventory, work study and engineering.
- C. Execution of action plans.
 - viii. Execute specific plans for every action
 - ix. Track the outcomes and plans
 - x. Recalibrate benchmarks

Review of Literature

Edith Cowan University, 2011- a process of adopting best practices from different companies of same industry through comparison between processes, services, outcomes and products.

Epper, 1999- the best way for a firm to understand the level of its process is through self-analysis for a clear knowledge.

Arya et.al (2017), Identifying the inefficiency for achieving standard i.e, various financial indicators can be considered and compared for analysis a stable growth

Henderson-Smart, Winning, Gerzina, King, & Hyde, 2006 – an achievable standard model to be implemented as Quality Assurance Model by the manager or external inspection.

Kumar A. (2018), achievement of desired position can be established through comparing the expected growth and sustainable growth a firm can achieve a continuous growth.

Kaplan & Norton 2003, the intangible assets for a company are strategic job families, human capital, and the linkage between information and organisation capital are to be measured and considered.

Arya et.al (2017), a continuous growth achievement is possible though comparison between benchmarking and proper strategies.

Objective of Study

- To understand benchmarking and economic ranking concept.
- To analyse the companies of Indian cement industry in respect to key performance indicators (KPI).
- To ascertain the peer group companies and Benchmark Company in cement industry through comparison to establish the gap and deficiency.
- To suggest certain management tools for the growth of level of performances.

2. Research Methodology

The data is collected from the secondary sources of twenty-two top performer in the Indian cement industry is considered. The data includes the net sales, net profit, market capitalisation and employee cost for the year 2017. From the data the Total Asset Turnover ratio, Net Profit Margin, Employee over Net sales is computed and the economic rank is set for each companies. The rank correlation is computed among those economic or benchmarking indicators.

Hypothesis

H_0 : There is no association of monotonic between the benchmarking indicators.

H_1 : There is an association of monotonic between the benchmarking indicators.

Indian Cement Industry- An Overview

A positive trend is observed from its past in Indian cement Industry. Due to the advancement in technology, raw material availability, supply chain management efficiency made the cement companies to prosper in developing their products by using blended cement, recycled aggregate, customization as per site requirement, better and quality products for unorganised sites.

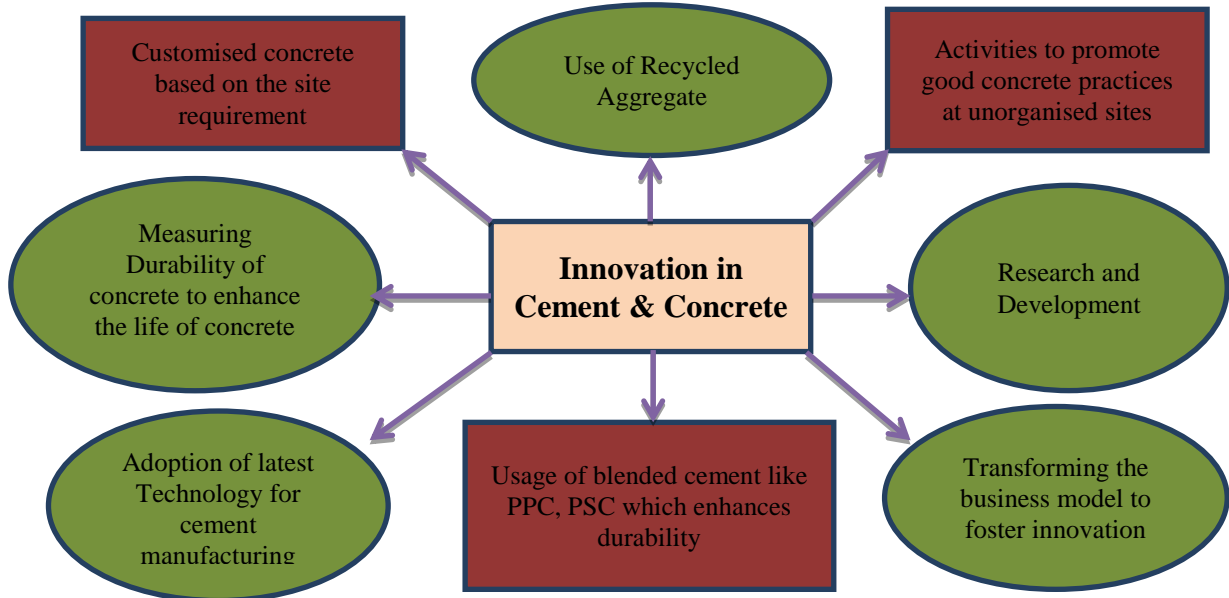


Fig-2: Innovation in Cement and Concrete

Several manufacturers are providing free training to the contractor and consultant for the effective use and aware about new product development. Few companies are working on to provide the cement that is manufactured from recycle products.

Financial Performances:

The indicators that are considered for economic ranking and the indicators to set the benchmark company for all the companies in same industry.

Table-1- Financial Performance (2017-18) of selected Companies in Cement Industry:

Companies	Net Sales	Net Profit	Market Capitalisation	Total Assets	Employee cost	Total Asset Turnover ratio	Net Profit Margin	Employee over Net sales
<i>Ultratech Cement</i>	23891.43	2627.72	109842.85	26414.69	1413.44	90.45	11.00	5.92
<i>Shree Cement</i>	8429.16	1339.11	57208.65	7091.11	537.18	118.87	15.89	6.37
<i>India Cements</i>	5777.52	173.35	4120.22	7004.12	377.85	82.49	3.00	6.54
<i>Ramco Cement</i>	3949.54	649.29	20198.85	4565.08	277.73	86.52	16.44	7.03
<i>JK Cement</i>	4420.71	259.58	6782.24	3991.23	275.46	110.76	5.87	6.23
<i>Birla Cement</i>	3345.12	214	5642.18	4532.88	264.53	73.80	6.40	7.91
<i>JK Laxmi Cement</i>	2910.41	82	4484.99	2830.6	208.39	102.82	2.82	7.16

<i>OCL India</i>	2911.87	383.87	7453.93	2981.9	190.72	97.65	13.18	6.55
<i>Orient Cement</i>	1875.14	-32.1	2522.96	2060.05	121.29	91.02	-1.71	6.47
<i>Heidelberg Cem</i>	1717.46	76.21	3418.46	1184.26	114.76	145.02	4.44	6.68
<i>Dalmia Cement</i>	222.51	63.37	24644.65	1523.21	110.46	14.61	28.48	49.64
<i>KCP</i>	818.29	29.6	1621.83	678.61	77.94	120.58	3.62	9.52
<i>MangalamCem</i>	908.57	36.63	748.09	662.48	77.94	137.15	4.03	8.58
<i>SaurashtraCem</i>	474.88	9.64	476.03	244.82	39.25	193.97	2.03	8.27
<i>GujSidheeCem</i>	437.36	-39.04	256.74	160.01	34.6	273.33	-8.93	7.91
<i>Andhra Cem</i>	349.29	-103.12	290.59	779.88	28.24	44.79	-29.52	8.08
<i>Shree Digvijaya</i>	319.14	-14.17	393.73	267.78	26.6	119.18	-4.44	8.33
<i>Panyam Cements</i>	208.08	4.24	61.63	142.26	13.54	146.27	2.04	6.51
<i>Rain Industries</i>	59.62	32.11	8089.11	1078.79	12.27	5.53	53.86	20.58
<i>Barak VallyCem</i>	122.53	1.35	54.07	141.64	8.37	86.51	1.10	6.83
<i>BurnpurCem</i>	74.34	-53.88	47.28	76.03	5.98	97.78	-72.48	8.04
<i>Udaipur Cem</i>	85.16	2.85	643.55	707.6	3.55	12.04	3.35	4.17

Source: Money Control

Economic ranking of the companies will help to identify the companies about their position in various aspects amongst their competitor which will help to make certain strategic decision to increase the level of performances.

Table-2- Economic Ranking of selected companies in Indian Cement Industry

Companies	Net Sales	Net Profit	Market Capitalisation	Total Asset Turnover ratio	Net Profit Margin	Employee over Net sales
<i>UltraTech Cement</i>	1	1	1	14	6	21
<i>Shree Cement</i>	2	2	2	8	4	19
<i>India Cements</i>	3	7	10	17	13	16
<i>Ramco Cement</i>	5	3	4	15	3	12
<i>JK Cement</i>	4	5	7	9	8	20
<i>Birla Cement</i>	6	6	8	18	7	10
<i>JK Laxmi Cement</i>	8	8	9	10	14	11
<i>OCL India</i>	7	4	6	12	5	15
<i>Orient Cement</i>	9	19	12	13	18	18
<i>Heidelberg Cem</i>	10	9	11	4	9	14
<i>Dalmia Cement</i>	17	10	3	20	2	1
<i>KCP</i>	12	13	13	6	11	3
<i>MangalamCem</i>	11	11	14	5	10	4
<i>SaurashtraCem</i>	13	14	16	2	16	6
<i>GujSidheeCem</i>	14	20	19	1	20	9
<i>Andhra Cem</i>	15	22	18	19	21	7
<i>Shree Digvijaya</i>	16	18	17	7	19	5
<i>Panyam Cements</i>	18	15	20	3	15	17
<i>Rain Industries</i>	22	12	5	22	1	2
<i>Barak VallyCem</i>	19	17	21	16	17	13

<i>BurnpurCem</i>	21	21	22	11	22	8
<i>Udaipur Cem</i>	20	16	15	21	12	22

Source: Money Control

Analysis of Economic Ranking:

Spearman's coefficient of correlation: this helps to identify the degree of link between the set of data. The monotonic relation can be established through Spearman's correlation through linear or not. It can be termed as perfect monotone only when the result is +1 and -1. The result will show high when the rank of one is close to the other and less when both the result of ranks are fully opposite.

To identify the relation between ranks the Spearman's coefficient of correlation is evaluated and showed below:

Table-3-Coefficient of Rank Correlations

	NS	NP	MC	TATR	NPM	EONS
NS	1					
NP	0.774	1				
MC	0.634	0.859	1			
TATR	0.123	-0.089	-0.330	1		
NPM	0.374	0.816	0.884	-0.324	1	
EONS	-0.470	-0.345	-0.170	0.032	-0.049	1

Note:NS- Net Sales, NP-Net Profit, MC- Market Capitalisation, TATR- Total Asset Turnover Ratio, NPM- Net Profit Margin, EONS- Employee over Net Sales.

Interpretation

Here from the above analysis we can see a high degree of monotonic relationship between net profit margin and market capitalisation. Followed with net profit and market capitalization i.e. any rise in market capitalization it leads to rise in net profit margin and net profit. Here we can see a negative relationship between Employee over Net Sales with Net sales and net profit i.e. any rise in net sales or net profit will decrease the Employee over Net Sales

Coefficients of Determination:

The tool that predict the outcomes of future or for hypothesis testing. This shows how the result outcome is replicated to the model.

To identify the strength between ranks of the correlation the Coefficients of Determination evaluated and showed below:

Table-4-Coefficient of Determinants

	NS	NP	MC	TATR	NPM	EONS
NS	1					
NP	0.5990	1				
MC	0.4019	0.7378	1			
TATR	0.0151	0.0079	0.1089	1		
NPM	0.1398	0.6658	0.7814	0.1049	1	
EONS	0.2209	0.1190	0.0289	0.0010	0.0024	1

Note:NS- Net Sales, NP-Net Profit, MC- Market Capitalisation, TATR- Total Asset Turnover Ratio, NPM- Net Profit Margin, EONS- Employee over Net Sales.

Interpretation

The result of coefficient of determinations between Market Capitalisation and Net Profit margin 0.7378. This output mentions that most of the firms are focusing on increasing the market capitalization and net profit margin. Adding to it the companies are found to be more concerned for Net profit and Market Capitalisation

as the result shows 0.7814 which is great strategy by the cement industries. However, in comparison to other measures the output is found to be very less. This can be concluded that the optimum utilisation of entire cement industry suffers in total assets.

Testing of Hypothesis

Table-5- Testing of Hypothesis

		Net Sales	Net Profit	Market Capitalisation	Total Assets Turnover ratio	Net Profit Margin	Employee Over Net Sales
Net Sales	Pearson Correlation	1	.774**	.634**	.123	.374	-.470*
	Sig. (2-tailed)		.000	.002	.587	.086	.027
	N	22	22	22	22	22	22
Net Profit	Pearson Correlation	.774**	1	.859**	-.089	.816**	-.345
	Sig. (2-tailed)	.000		.000	.695	.000	.116
	N	22	22	22	22	22	22
Market Capitalisation	Pearson Correlation	.634**	.859**	1	-.330	.884**	-.170
	Sig. (2-tailed)	.002	.000		.133	.000	.451
	N	22	22	22	22	22	22
Total Assets Turnover ratio	Pearson Correlation	.123	-.089	-.330	1	-.324	.032
	Sig. (2-tailed)	.587	.695	.133		.142	.887
	N	22	22	22	22	22	22
Net Profit Margin	Pearson Correlation	.374	.816**	.884**	-.324	1	-.049
	Sig. (2-tailed)	.086	.000	.000	.142		.828
	N	22	22	22	22	22	22
Employee Over Net Sales	Pearson Correlation	-.470*	-.345	-.170	.032	-.049	1
	Sig. (2-tailed)	.027	.116	.451	.887	.828	
	N	22	22	22	22	22	22

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

3. Result and Analysis:

From the above analysis it can be stated that:

- Net Sales: there exists a statistical significance between Net profit, market capitalisation at 1% level of significance and Employee over net sales at 5 % level of significance. It means we accept our alternative hypothesis and reject of null hypothesis for the following indicators.
- Net Profit: here we accept alternative hypothesis and reject null hypothesis at 5% level of significance for Net Sales, Market Capitalisation and Net Profit Margin. It means there exist monotonic relationship between the indicators.

- Market Capitalisation: there exists a statistical significance between Net sales, Net profit, and Net profit margin at 1 % level of significance. It means we accept our alternative hypothesis and reject of null hypothesis for the following indicators.
- Total Assets Turnover ratio: here we accept null hypothesis and reject alternative hypothesis as we don't find any statistical significance value for any indicators. It means there exist no monotonic relationship between the indicators.
- Net Profit Margin: there exists a statistical significance between Net profits, market capitalisation at 1% level of significance. It means we accept our alternative hypothesis and reject of null hypothesis for the following indicators.
- Employee over Net Sales: here we accept alternative hypothesis and reject null hypothesis at 5% level of significance for Net Sales. It means there exists monotonic relationship between the indicators.

4. Conclusion:

The cement industry is always considered as below average performer in contributing the national economic growth, while this is one of the industries which is highly prospering and consistently maintaining a sustainable growth rate. The sustainability is maintained due to frequent formulation of strategy by observing the competitor and R & D team. Due to such a practice it makes them the second largest manufacturer in the world. In respect to benchmarking and economic ranking from finance point of view gives a mixed result but it can be confirmed to increase the net worth of the firms they need to focus on export.

5. Recommendation

- Giving importance to "Nano Pro-Tech" (Nanostructure-Oriented Properties Control Technology).
- Strategy of Concentric diversification will support the company for growth.
- Strong regional and divisional distribution channel should be made
- Publicity of advanced technology.
- Reduce the stakeholding fundings and depending on internal arrangements.
- Company should focus on producing the high quality products instead of backward or forward integration.
- For the quality improvement all company should focus on business process re-engineering.
- Practice on life cycle costing, target costing and active based management should be followed by each company.
- Lean management practice should be given priority like total quality management, total productive maintenance, flow char and workplace redesigning techniques to be followed for reducing the wastage in process and increasing product value for the customer.

References:

Articles

- A. K. (2018). Innovative instrument impact on Security Trading - A Case Study of Indian Financial Derivative Market. *Journal of Advanced Management Research*, 6(4), 205-215.
- Arya et.al (2017) "Reflection of Firms Performance through Return on Equity – A study on Sensex Companies in India" *The Management Accountant*, Vol 52, Issue 5, pp: 96-101
- Arya et.al (2017) "Benchmarking and Economic Ranking-Indian Tyre Industry" *The Management Accountant*, Vol 52, Issue 7, pp: 34-41.
- Edith Cowan University. (2011). Benchmarking Policy. Retrieved from http://www.ecu.edu.au/GPPS/policies_db/tmp/ad075.pdf
- Epper, R. M. (1999). Applying benchmarking to higher education: Some lessons from experience. *Change*, 31(6), 24-31
- Henderson -Smart, C., Winning, T., Gerzina, T., King, S., & Hyde, S. (2006). Benchmarking learning and teaching: Developing a method. *Quality Assurance in Education*, 14(2), 143-155. doi: 10.1108/09684880610662024
- Kaplan, R. S., and D.P. Norton (2003) *Strategy Maps*, Boston: HBS Press
- Nolan Norton Institute (1991) "Measuring Performance in the Organization of the Future: A Research Study."

Website:

- www.moneycontrol.com
- www.nistads.res.in
- www.rankingthebrands.com