

A Study on the Financial Performance Efficiency of Selected Cement Industries in India

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1. Introduction:

In the last two decades, the Indian cement industry has developed dramatically, passing through all the stages of the traditional cyclical growth process. The industry is currently in a consolidation stage after a period of over-supply and a process of major capacity additions. With sound economic growth and the construction of infrastructure, there is an upward trend in demand for cement. In order to respond to the growing demand for cement, more capacity is being added. India, after China, is the second largest cement manufacturer. With a volume of 160 m.t. It created 142 M.t. in 2007. In the year 2006. India's per capita cement intake is 125 kg, which is just around a third of the world average. This demonstrates the growth potential for this field. Cement demand depends primarily on the degree of development and the pace of growth of the economy. Cement production increased from 23.5 m.t.in 1983 to 44.1 m.t.in 1989 and to 142 m.t. in the post-deregulation period.

2. REVIEW OF LITERATURE

- ❖ Alovzat Muslumov (2005) concluded that the privatization was associated with a declining value added and shareholders' profitability in Turkish cement industry. A decline in the value added and shareholders' profitability were mainly caused by the decrease in return on assets. The decline in the return on asset was traced to declining asset productivity. These results are not consistent with previous cross-sectional privatization studies and a number of country studies.
- ❖ Jayant Sathaye (2005) the study revealed that, the Indian cement industry has grown rapidly over the past few decades and there have been significant investments in new cement kilns and associated production equipment. This has led to a situation where India's cement industry in made up of both some of the world's most energy-inefficient plants as well as some of the world's best practice facilities. The challenge for the Indian cement industry is to modernize or phase out the older, inefficient plants while acquiring the best possible cement production technology as production inevitably expands in the coming decades.
- ❖ Hiral Shah and Heinz Telser (2006) revealed that the Indian cement plants, which are technical, advanced, manned by skilled personnel, and supported by an increasing

consumption, are operating at close to the maximum rated capacities. Furthermore, the annual growth figures of seven to eight percent are expected to prevail in the coming years. In view of the enormous growth potential for domestic consumption, India will be a strategic target for international cement companies.

- ❖ Kulansizoglu (2007) concluded that the cement industry has gradually become more competitive over time since the sign of parameter of time trend in their supply equation is negative and the parameter itself, although small in absolute value, is statistically significant. The competition Authority dummy turned out to be statistically in-significant even when they assume that it might have a logged impact. These results are contrary to priority expectations and show that the introduction of competition policy has not made the cement industry more competitive despite all the investigations and monetary penalties.
- ❖ L.G.Burange and Shruti Yamini (2008) in their study computed the Annual Compound Growth Rates (ACGR) as per semi log method for 37 years from 1970-71 to 2006-07. According to the study the performance of primary indicators in the Indian cement industry has been very impressive during the period 1970-71 to 2006-07.

3. METHODOLOGY

For the period from 2001-2002 to 2012-13, the secondary data used in the study were collected from the database maintained and made accessible by several organisations, namely the Cement Manufacturers Association, Centre for Monitoring the Indian Economy (CMIA), CRISIL Sector Analysis, CRISIL Bombay Executive Summary, ICRA Industry Watch Series (various issues) ICRA, Bombay, Annual Industries Survey (ASI), Information has been sourced by access to paid databases and websites from books, newspapers, trade journals, white papers, business portals, government departments, trade associates, industry news and progress.

Associated Cement Companies Ltd, Ambuja Cements Ltd, Birla Company Ltd, Century Textiles and Industries Ltd, Deccan Cements Ltd, Heidelberg Cement India Ltd, India Cements Ltd, are the following seventeen cement industries for the report.

4. LIMITATIONS OF THE STUDY

The research is limited exclusively to seventeen major cement firms. A major constraint is the time and expense involved in the processing of data. For all the cement industries in India, the

study findings could not be generalised. The data source is secondary in nature, so it is difficult to authenticate.

5. STATISTICAL MODEL

Ratio analysis is a performance measurement technique which, can be used for evaluating the relative efficiency of decision-making units (DMU's) in Cement Companies. Many theoretical and empirical work has been carried out and many studies have been published DEA in real-world situations.

6. OBJECTIVES

- To measure the overall performance efficiency of the seventeen cement industries in India.
- To analyze the trends in primary performance indicators of Indian cement industry.

From the following data, the efficiency in converting their inputs into outputs of overall Income and Expenditure for Cement Companies is defined simply as:

$$\text{Performance Ratio} = (\text{Output/Input})$$

The following Table 1.1 gives the DEA Analysis of overall Income and Expenditure for Cement Companies for the period March 2002 to March 2007 and March 2008 to March 2013 for the different variables.

Table1.1. Overall performance efficiency of Cement Companies based on certain Income and Expenditure variables

Variables	March 2002 to March 2007	March 2008 to March 2013	Efficiency	Relative Efficiency
Income from Sales	98440.76	538607.36	5.47	4.88
Income from non-financial services	5157.75	5553.35	1.08	0.96
Income from financial services	1619.08	7509.37	4.64	4.14
Interest income	633.98	2951.04	4.65	4.15
Dividends	278.42	1158.86	4.16	3.71
Operating expenses	86025.55	437018.74	5.08	4.53
Raw materials, stores and spares	13924.80	86107.92	6.18	5.51
Packaging and packaging expenses	3209.42	12954.22	4.04	3.60
Power, Fuel and water Charges	24235.93	111336.25	4.59	4.10
Compensation to employees	6099.75	26904.58	4.41	3.93
Indirect taxes	16013.31	70734.10	4.42	3.94
Repairs and maintenance	2478.33	10415.07	4.20	3.75
Insurance premium paid	368.44	1074.61	2.92	2.60
Selling and distribution expenses	13243.85	88507.83	6.68	5.96
Interest paid	8994.51	17914.87	1.99	1.78

For the various variables, the output ratio for March 2002 to March 2007 and March 2008 to March 2013 shows that revenue from sales is the most lucrative term relative to the other variables that are accompanied by interest income. Based on the relative efficiency scores of each of the variables, the cost of sale and distribution is higher by expenditure on raw materials, stores and spares that can be minimised to increase the company's efficiency. A useful indicator of growth over several time periods is the compound annual growth rate (CAGR). If you assume that the variables have multiplied over the time, it can be thought of as the growth rate that takes you from the initial value to the end value. Sales growth is important because you want to know, as an investor, that the demand for the goods or services of a business will increase in the future.

While not an accounting word, in addition to being used for comparing growth rates, the compound annual growth rate definition is commonly used in growth industries. These are some of the popular CAGR applications for evaluating and communicating the actions of various business metrics over a number of years, such as production, export, sales, market share, costs, consumer satisfaction and efficiency. The performance of cement industries is evaluated by certain primary indicators. Installed capability, production, capacity usage, export, per-capita consumption, revenue, operating cost, total income and total expenses are the key performance measures.

Table 1.2. CAGR for Sales and operating cost for the period March 2002 to March 2013

Year	Sales (Crores of Rs)	Operating cost (Crores of Rs)
March 2002	13617.01	11279.83
March 2003	14528.77	12555.88
March 2004	16402.36	13904.14
March 2005	18759.19	15767.8
March 2006	24048.76	18929.39
March 2007	30887.18	22186.36
March 2008	37198.49	26267.7
March 2009	40079.77	30384.69
March 2010	46669.62	34593.88
March 2011	47494.42	38867.02
March 2012	58183.89	47494.68
March 2013	65731.82	54427.22
CAGR	14.02%	14.01%

Computed If the sales grew from 13,617.01 to 65,731.82 during the past 12 years, then the CAGR of the sales is 14.02% per year. If the Operating cost grew from 11,279.83 to 54,427.22 during the past 12 years, then the CAGR of the operating cost is 14.01% per year.

Table 1.3. CAGR for Total Income and Total expenses for the period March 2002 to March 2013

Year	Total Income (Crores of Rs)	Total Expenses (crores of RS)
March 2002	186,828.53	188,586.07
March 2003	186,807.07	187,212.33
March 2004	240,714.90	238,143.80

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March 2005	280,656.27	268,421.49
March 2006	369,358.11	340,195.51
March 2007	626,058.87	537,028.51
March 2008	624,871.15	531,748.64
March 2009	812,278.77	715,526.21
March 2010	724,258.09	639,381.69
March 2011	811,599.72	763,477.88
March 2012	1,032,738.53	953,221.75
March 2013	1,139,528.03	1,068,647.47
CAGR	16.26%	15.55%

7. CONCLUSION

Sales revenue is the most proficient term that is accompanied by interest income than the other variables. 14.01 percent a year is the CAGR of the operating rate. Of the overall expenditures, the CAGR is 15.55 percent per annum. The performance quality of the Indian cement industry is being improved.

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