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

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Abstract: *The production of cement in India has increased at a compound annual growth rate (CAGR) of 9.7 percent to reach 272 million tons (MT) n the period 2006-2013.It is expected to touch 407 MT by 2020In this research the author make use of cement industry in India to find out the overall financial performance efficiency. India is the second largest producer of cement in the world Twelve years data has been employed in this study from 2001-2002 to 2012-2013. To find out the overall performance efficiency the authors employed Ratio Analysis and Compound Aggregate Growth rate (CAGR). The authors found that the cement industry performance was good in India during the study period. The authors conclude that the Cement companies in India have to consolidate in order to become strong, vibrant and also they have to concentrate on export market.*

Keywords: *Cement Industry, Consolidate, CAGR,, Efficiency, Financial Performance*

1. INTRODUCTION

The industry provides direct employment to 70000 people. Coal continues to be the main fuel for the cement industry. At present, 60%of coal requirement of the cement industry is met through linkages and fuel supply agreements, while the remaining requirement is met from open-market purchases, import, and use of petroleum coke. The production of cement is a continuous process requiring uninterrupted power supply. Most of the cement units have installed captive power generation to the extent of 60% to 100% of their requirement.

2. REVIEW OF LITERATURE

Alovsat 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 grownrapidly 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.

Ajan Ghosh,sabyasachi Majumdar,rohit Inamdar, and Anil Gupta (2010) evaluated CAGR between the period 2004-09.the findings reveal that CAGR for the period 2004-09 was 9.35 and the Capacity addition of cement CAGR was 5.6%.Even during the economic slowdown the cement demand remained healthy at 8.4% (2008-09). This was due to the government programmes like NREG, low cost housing schemes, Indira Aawas Yojana etc.

S. Chandrakumarmangalam and P. Govindasamy (2010) investigate the relationship between the leverage (financial leverage, operating leverage and combined leverage) and the earning per share, and this study also explains the relationship between the Debt equity ratio and Earning per Share and how effectively the firm be able debt financing, the results suggest that the leverage and profitability and growth are related and the leverage is having impact on the profitability of the firm.

Chakraborty (2010) employed two performance measures, including ratio of profit before interest, tax and depreciation to total assets and ratio of cash flows to total assets and two leverage measures, including ratio of total borrowing to assets and ratio of liability and equity, and reported a negative relation between these ones.

Mistry Dharmendra S (2011) found that Liquidity is closely related with the profitability of the Indian Cement Industry as compared to the Total Assets, Inventory Turnover Ratio, Debt-Equity Ratio and Operating Expenses Ratio.

Hajihassani (2012) presented A Comparison of Financial Performance in Cement Sector in Iran. This study presents comparison of financial performance for the period 2006–2009 by using financial ratios and measures of cement companies working in Iran. Financial ratios are divided into three main categories and measures including two indicators. This work concludes that the performance of cement companies on the basis of profitability ratio is different than on the basis of liquidity ratio, leverage financial.

Timetric Report (2012) The worldwide concrete and cement market was worth USD 449.4bn in 2012, posting a CAGR of just over 4% during 2008-2012; however, growth was subdued by an 11.8% decline in 2009 on the back of a slowdown in construction activity. Over the next five years, the global concrete and cement market is expected to record nearly 8.5% CAGR, supported by the growing construction industry worldwide, the moderation of the economic slump in Europe, and infrastructure development projects in emerging countries.

Asia-Pacific remains the largest regional concrete and cement market, which posted a CAGR of around 14.8% during 2008-2012 and reached a value of USD 261.1bn in 2012. China held the largest share of the regional market – about 71.5% in 2012, followed by India and Japan with shares of close to 10.5% and 7%, respectively. Large-scale investments in construction will fuel the demand for concrete and cement in these countries. The Indonesian construction industry is also expected to record substantial investments, supported by urbanization, income growth and government initiatives to enhance infrastructure, as part of its mission to take the country's economy into the global top-10 by 2025. During 2013-2017, the overall concrete and cement market in Asia-Pacific is expected to post nearly 10.4% CAGR. According to the report, the global concrete and cement market is expected to record nearly 8.5% CAGR during 2013-2017.

3. METHODOLOGY

The secondary data used in the study were collected for a period from 2001-2002 to 2012-13 from the database maintained and made available by several organizations viz, cement manufacturers association, Centre for monitoring Indian economy (CMIA), CRISIL sector Review, Executive

summary of CRISIL Bombay, ICRA Industry Watch Series (various issues) ICRA, Bombay, Annual Survey of Industries (ASI), New Delhi , Economic Survey of India, Central Statistical Organization (various issues) Government of India, New Delhi. Information has been sourced from Books, Newspapers, Trade Journals, White papers, Industry Portals, Government agencies, Trade Associates, Industry News and development, through access to paid databases and Websites.

The following seventeen cement industries are taken for the study and they are Associated Cement Companies Ltd, Ambuja Cements Ltd, Birla Corporation Ltd, Century Textiles and Industries Ltd, Deccan Cements Ltd, Heidelberg Cement India Ltd, India Cements Ltd, J.K.Lakshmi Cement Ltd, Krishna Commercial Products Ltd, Mangalam Cement Ltd, Orrisa Cement Ltd, Prism Cement Ltd, Ramco Cements Ltd, Sagar Cements Ltd, Sanghi Industries Ltd, Saurashtra Cement Ltd and Shree cement Ltd

4. LIMITATIONS OF THE STUDY

The study is limited to seventeen large sized cement companies only. The time and cost involved in the collection of data is a major constraint. The results of the study may not be generalized for all the cement industries in India. The source of data is secondary in nature, so authentication is not possible.

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:

Performance Ratio = (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

Non-cash charges	5445.42	29925.87	5.50	4.90
Depreciation	5042.31	28312.28	5.61	5.01

The performance ratio for the period March 2002 to March 2007 and March 2008 to March 2013 for the different variables suggests income from sales is the most Proficient expression than the other variables followed by interest income. Based on the each of the variables relative efficiency scores, selling and distribution expenses is higher by expenses on raw materials , stores and spares which should be reduced to improve the efficiency of the firms.

The compound annual growth rate (CAGR) is a useful measure of growth over multiple time periods. It can be thought of as the growth rate that gets you from the initial value to the ending value if you assume that the variables has been compounding over the time period. Sales growth is important because, as an investor, you want to know that the demand for a company's products or services will be increasing in the future. Although not an accounting term, the concept of compound annual growth rate is used widely in growth industries in addition to being used for comparing the growth rates.

These are some of the common CAGR applications in analyzing and communicating the behavior, over a series of years, of different business measures such as production, export, sales, market share, costs, customer satisfaction and performance.There are certain primary indicators to analyze the performance of cement industries. The primary performance indicators are Installed capacity, production, Capacity Utilization, Export, per-capita consumption, Sales, Operating Cost, Total Income and Total Expenses.

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

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%

Computed

If the total income grew from 186,828.53 to 1,139,528.03 during the past 12 years, then the CAGR of the sales is 16.26 % per year. If the total expenses grew from 188,586.07 to 1,068,647.47 during the past 12 years, then the CAGR of the total expenses is 15.55% per year.

7. CONCLUSION

Income from sales is the most Proficient expression than the other variables followed by interest income. The CAGR of the operating cost is 14.01% per year. The CAGR of the total expenses is 15.55% per year. There is an improvement in the performance efficiency of the Indian cement Industries.

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