Financial Performance Of Cement Industry In India – A Profitability Study

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Abstract

Cement is a top priority construction material and hence is the fastest growing sector both worldwide and in India. India happens to rank the second in cement manufacture and consumption. India is a fast and rapid growing economy and has the largest growth potential to develop in the spheres of infrastructure and construction. Cement is the essence material for infrastructure development and hence the economic development of any economy. The Cement industry generates immense employment opportunities, directly and indirectly that is required for the development of under developed countries. Cement is the base material for all types of construction works, starting from smallest building to largest structures like dams and irrigation works. In India, cement industry is the prominent one where huge investments are made by both domestic and foreign investors. Cement industry in India is now heading towards achievement of global standards in production, safety and efficient use of energy. Another important target set for the cement industry in India is the sustainable development. The current study relates to the analysis of financial performance of select cement manufacturing companies in India with reference to Profitability using various profitability ratios. The study is restricted to three cement manufacturing companies, selected using certain criteria, for a period of five years ranging between 2018-19 to 2022-23. The study tends to reveal the performance efficiency of the selected companies with respect to its profitability position.

Key words: Gross Profit Ratio, Net Profit Ratio, Anova, Profitability, correlation.

Introduction

REVIEW OF LITERATURE

Mishra.U.C., Sarsaiya.S& Gupta. A.A (2022), studied the negative health effects of cement plant exposure that is well-known in industrial settings, but is less known among the general public who live near the Cement plants. According to the findings of the study, India is the second largest cement producer after China, with an installed capacity of 537 million tonnes and around 7.1 percent of the world's production, up from 337.32 million tonnes in 2019. NOx, SOx, CO, CO2, H2S, VOCs, dioxins, furans, and particulate matter are all common air pollutants from cement manufacturing. Other sources of dust particles include quarrying, blasting, drilling, trucking, cement plants, fuel production, packaging, path cleaning, and slabs. Other methods of reduction play an important part in decreasing industrial emissions, resulting in lower carbon and more sustainable products. Furthermore, employing sustainable techniques and technology, switching to alternative fuels will save 12% of total CO2 emissions by 2050.

Balsara, S., Jain, P.K. & Ramesh, A (2021), in the study on integrated methodology to overcome barriers to climate change mitigation strategies in cement industry in India suggest ways to mitigate pollution from Cement industry. Cement is a basic requirement of today's society and is the only thing that humans consume more volume than water, but cement manufacturing is the most energy- and emission-intensive process. Hence, the cement industry is currently under pressure to reduce greenhouse gases (GHGs) emissions. Climate change mitigation strategies implemented in the industry leads to GHGs reduction, climate risks, pollutants, and another adverse impact on the environment. In order to implement climate change mitigation strategies in the cement industry, a careful analysis of barriers that hinder the emission reduction must be taken. However, most existing research on the barriers to mitigation measures is focused on developed countries. Among the most important emerging economies, India, the second-largest producer and consumer of cement, faces challenges to implement emission reduction

measures. To bridge this gap, this paper identifies and evaluates the barriers and solutions to overcome these barriers in the context of India.

Nayaka, Basavanagouda (2021), study the impact of GST on Cement industry in India. Cement industry plays a crucial role in the development of the economy. It contributes significantly to the GDP and generates employment. Growing population, increasing scale of economic activities, and growth in the real estate sector has led to a boom in Indian cement industry. Various infrastructural development initiatives of Central and State Government also stimulated demand for cement. Indian cement industry has enormous growth potential. It is attracting FDI through mergers and acquisitions. The synergic effect has resulted in technological advancements and production efficiency in cement industry. Despite of having huge growth potential, the growth of cement industry in India is not satisfactory due to various economic and other policy implications. A high rate of GST is one of the most important factors hindering the growth of cement industry.

Andrew, R. M. (2019) Estimating global process emissions from cement production is fraught with problems of data availability, and has always required strong assumptions. Over the last 3 decades, countries around the world have increasingly been producing blended cements with lower clinker ratios and the use of cement production data with constant emission factors has become untenable. The new global cement emissions database presented here increases the reliance on official and reliable data sources, and reduces reliance on assumptions, compared with previous efforts. The database is used in the Global Carbon Budget for the first time in the 2018 edition, and the intention is that it will be updated annually, with both data updates and methodological improvements under the “living data” format. As more countries estimate their emissions and report them to the UNFCCC in detail, more data will replace assumptions in producing this dataset. Work is still required in improving estimates of cement emissions from both China and India in particular, as these are the world's two largest cement producers and official time series estimates are lacking.

STATEMENT OF THE PROBLEM

Financial management gains momentum now a day and ensures success in any business. Management of finance has become an inevitable and vital component of company management. The Financial management of a company comprises various sub components namely management of liquidity, profitability, solvency, leverage, and market efficiency. Profitability analysis means analyzing how profitable the company is. It analyses primarily the two aspects of the profit namely gross profit and net profit. The main motive of any company is to earn profit to the share holders. A company with poor profitability will face a fall in share price and difficulties in raising fund for further development. It at severe stage may even lead to liquidation of the company.

Infrastructure development is an inseparable part of economic development. Infrastructure development is not possible without construction of structures. The construction industry primarily depends on cement, as it is the base material for the same. This implies cement is a vital material which pivots the economic development of the country. So the financial soundness of the company's manufacturing cement has to be ensured to maintain uninterrupted supply of the base material, cement. Hence analysis of profitability position of the selected cement manufacturing companies in India is more relevant to ensure the financial soundness of the cement industry which is needed to safeguard the investors wealth and to boost the economic growth of the country.

OBJECTIVES OF THE STUDY

The study is based on the following objectives:

1. To analyze the profitability position of the selected cement manufacturing companies in India using suitable ratios.
2. To find and establish the relationship between the profitability trends of the selected Cement manufacturing companies in India during the study period.

PERIOD OF THE STUDY

The present study pertains to a period of Five years ranging from 2018-19 to 2022-23. The Five years data are collected, classified and tabulated to favor the present profitability analysis in the study.

SAMPLING

The population of the present study is the Cement manufacturing companies in India. From the vast population chosen for the study, Cement manufacturing companies that are listed with National Stock Exchange is derived from the official website of money control (www.moneycontrol.com). The companies in the list are grouped under three categories namely large cap companies, medium cap companies and small cap companies, based on the size of their market capitalization. Companies with market capitalization of 20,000 crores or more are classified as large cap, those with market capitalization of 5,000 crores or more but less than 20,000 crores are classified as medium cap and those with market capitalization of less than 5,000 crores are classified as small cap companies. The company that ranks first in each category is chosen as sample for the study. The companies thus chosen for the present study are

1. Ultra Tech cement (Large cap)

2. India Cements (Medium cap)

3. Sagar cements (Small cap)

SCOPE OF THE STUDY

The present study covers the analysis of the profitability status of cement industry in India using a sample of three cement manufacturing companies chosen on the basis of the market capitalization of the companies. The study also analyzes the relationship between the trends of profitability status of the selected companies.

DATA COLLECTION

The data used for the present study is mainly based on secondary data that are collected from the published annual reports of the selected cement manufacturing companies in India. Few data are collected from various websites, periodicals like Economic times, financial express and a variety of published Journals.

TOOLS FOR ANALYSIS

The tools used for the analysis of financial performance are

1. Trend Analysis

2. Ratio Analysis
3. ANOVA Test
4. Hypothesis Testing
5. Mean, Standard Deviation and Coefficient of Variation
6. Multivariate correlation

HYPOTHESIS

H0A: There is no significant difference in Gross profit ratio of selected Companies during the study period.

H0B: There is no significant difference in Net profit ratio of selected Companies during the study period.

TRENDS OF PROFITABILITY RATIOS

Profitability ratios used for the study are

1. Gross profit Ratio
2. Net profit Ratio

TREND OF GROSS PROFIT RATIO

The Gross profit ratio is calculated by dividing Gross profit by Net sales. To study the trend

of Gross profit Ratio in selected companies, Ultra Tech Cements, India Cements and Sagar

Cements, the data are presented in Table 1. 1.

Table 1. 1Gross profit Ratio

Year	Ultra Tech Cements	India Cements	Sagar Cements
2018-19	18.94	11.88	12.68
2019-20	23.07	12.11	15.95
2020-21	27.21	18.69	29.87
2021-22	22.79	10.13	19.96
2022-23	17.31	-2.6	13.22
Total	109.32	50.21	91.68
Average	21.86	10.04	18.34
Minimum	17.31	-2.6	12.68
Maximum	27.21	18.69	29.87
SD	3.88	7.78	7.06
CV	0.18	0.77	0.38

Source: Calculated from Annual Reports.

The Gross profit ratio of Ultra Tech Cements, India Cements and Sagar Cements touched the maximum level of 27.21, 18.69 and 29.87 respectively and a minimum level of 17.31, -2.60 and 12.68 respectively during the study period. The Gross profit ratio ranges between -2.60 to 29.87. Least standard deviation and coefficient of variation is observed in Ultra Tech Cements and highest deviation and variation is seen in India Cements. This implies a steady or less fluctuating or less volatile trend in the current ratios of Ultra Tech Cements and a more volatile or fluctuating trend in India Cements.

Table 1.2 ANOVA Table for Gross profit Ratio

Source	Sum of squares	Degrees of freedom	Mean squares	F value	P Value
Between Groups(SST)	368.33	2.0	184.16	4.40252	0.036819
Within Groups(SSE)	501.98	12.0	41.83		
Total	870.31	14.0			

Source: Calculated from Annual Reports.

From Table 1.2, P value is less than the calculated F value. Hence, the null hypothesis H0A is rejected.

Inference:

There is significant difference in Gross profit ratios of selected Companies during the study period.

Table 1.3 Correlation Analysis of Gross profit Ratio

	Ultra Tech Cements	India Cements	Sagar Cements
Ultra Tech Cements	1	-	-
India Cements	0.84	1	-

Sagar Cements	0.91	0.68	1

While studying the correlation between the Gross profit ratios of the selected companies in table 1.3, one may find a highest range of correlation between Ultra tech cements and Sagar cements. This implies that the trend of Gross profit ratios of these two companies are almost in the same direction and the factors affecting the Gross profit ratio of these companies are more related than any other set of company taken for the study. The lowest range of correlation is seen between Sagar cements and India cements that mean the factors affecting the Gross profit ratio of Sagar cements and the factors affecting the Gross profit ratio of India cements are less related. Otherwise to say the factors affecting the Gross profit ratio of Sagar cements and India cements are 68 percent same and 32 percent different**.**

TREND OF NET PROFIT RATIO

The Net profit ratio is a measure of Net profit earning capability of the company. The Net profit ratio is calculated by dividing Net Profit by Net sales. Net profit ratio serves as a supplement to the Gross profit ratio in analyzing profitability. To study the trend of Net profit Ratio in selected companies, Ultra Tech Cements, India Cements and Sagar Cements, the data are presented in Table 2.1.

Table 2. 1 Net profit Ratio

Year	Ultra Tech Cements	India Cements	Sagar Cements
2018-19	6.03	1.23	2.95
2019-20	13.42	-0.70	4.09
2020-21	12.36	5.00	13.76
2021-22	13.94	0.82	6.61
2022-23	8.01	-3.50	2.05
Total	53.76	2.85	29.46
Average	10.75	0.57	5.89
Minimum	6.03	-3.50	2.05
Maximum	13.94	5.00	13.76
SD	3.52	3.09	4.72
CV	0.33	5.42	0.80

Source: Calculated from Annual Reports.

The Net profit ratio of Ultra Tech Cements, India Cements and Sagar Cements touched the maximum level of 13.94, 5.00 and 13.76 respectively and a minimum level of 6.03, -3.50 and 2.05 respectively during the study period. The Net profit ratio ranges between -3.50 to 13.94. Least standard deviation and coefficient of variation is observed in India Cements and Ultra Tech Cements respectively and highest deviation and variation is seen in Sagar Cements and India Cements respectively. This implies a steady or less fluctuating or less volatile trend in the Net profit ratios of Ultra Tech Cements and a more volatile or fluctuating trend in India Cements.

Table 2.2 ANOVA Table for Net profit Ratio

Source	Sum of squares	Degrees of freedom	Mean squares	F value	P Value
Between Groups(SST)	259.36	2	129.68	8.78849	0.00446
Within Groups(SSE)	177.07	12	14.76		
Total	436.43	14			

Source: Calculated from Annual Reports.

From Table 1.2, P value is less than the calculated F value. Hence, the null hypothesis H0B is rejected.

Inference:

There is significant difference in Net profit ratios of selected Companies during the study period.

Table 2.3 Correlation Analysis of Net profit Ratio

	Ultra Tech Cements	India Cements	Sagar Cements

Ultra Tech Cements	1	-	-
India Cements	0.29	1	-
Sagar Cements	0.52	0.87	1

While studying the correlation between the Net profit ratios of the selected companies in table 2.3, one may find a highest range of correlation between Sagar cements and India cements. This implies that the trend of Net profit ratios of these two companies almost move in the same direction and the factors affecting the Net profit ratio of these companies are more related than any other set of company taken for the study. The correlation between Ultra tech cements and India cements is found to be the lowest. This mean the factors affecting the Net profit ratio of Ultra Tech cements and the factors affecting the Net profit ratio of India cements are less related. Otherwise to say the factors affecting the Net profit ratio of Ultra Tech cements and India cements are 29 percent same and 71 percent different**.**

FINDINGS:

1. The Gross profit ratio of Ultra Tech Cements shows a steady trend throughout the study period of five years while the Gross profit ratio of India Cements is more volatile during the same period. Thus Ultra Tech Cements performed well with respect to Gross profit ratio followed by Sagar Cements in second place and India Cements in the Last place.
2. The Net profit ratio of Ultra Tech Cements shows a steady trend throughout the study period of five years while the Net profit ratio of India Cements is more volatile during the same period. Thus Ultra Tech Cements performed well with respect to Net profit ratio followed by Sagar Cements in second place and India Cements in the Last place.
3. There is significant difference in Gross profit ratios of selected Companies during the study period.
4. There is significant difference in Net profit ratios of selected Companies during the study period.
5. A highest range of correlation between Ultra Tech Cements and Sagar Cements is found that implies the

trend of Gross profit ratios of these two companies are almost in the same direction and the factors affecting the Gross profit ratio of these companies are more related than any other set of companies taken for the study.

6. A highest range of correlation between India Cements and Sagar Cements is found that implies the trend of Net profit ratios of these two companies are almost moving in the same direction and the factors affecting the Net profit ratio of these companies are more related than any other set of companies taken for the study.

CONCLUSION:

The above study reveals that all the three companies selected for the study perform well in maintaining the Profitability during the study period. Out of the three companies the small cap company Sagar Cements comes first in the race of maintaining the profitability position followed by the large cap company Ultra Tech Cements, while the mid cap company India Cements lag far behind the other two companies in comparison.

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