

Study on Financial Performance of Select Cement Companies in South India Using Du-Pont Analysis

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Abstract

Presenting India as a matrix, the economic sector of cements is of great importance in every aspect of Indian economic development, such as infrastructure development, urbanization, and industrial development. The main purpose of the present study is to assess financial performance of selected cement companies of South India through DuPont Analysis. Secondary data is used for the study period, 2015 – 2025, which are published annual reports of selected Cement companies i.e. UltraTech Cement Limited, The Ramco Cements Limited, The India Cements Limited and Dalmia Bharat Limited. In order to fulfill the objectives of the study different analytical tools have been applied like DuPont Analysis, Trend Analysis, One Way ANOVA, Correlation Analysis, Multiple Regression Analysis, and Data Envelopment Analysis (DEA).

From the results of the study, it can be seen that there are indeed differences in the financial performance of the companies in question. It can be seen that UltraTech Cement has highest Profitability, Operational Efficiency, and ROE amongst the selected firms, followed by the least values of the financial size in case of India cements. The DuPont analysis revealed that Net Profit Margin, Asset Turnover Ratio, and Equity Multiplier had a significant impact in return on equity. Using the results of the correlation and regression analyses, it was found that the DuPont components were generally well correlated and positively related with ROE and the Net Profit Margin was found to be the most influential. Results of the DEA identified UltraTech Cement as the benchmark-efficient company and provided an opportunity to the relatively inefficient firms to improve their practices. The study findings shows that profitability, Efficient use of assets and ability in financial management are the major determinants which are going to affect the financial performance of the cement industry. Results offer useful recommendations to the managers, investors, financial analysis and policymakers of South Indian cement industry in areas of financial sustainability and competitiveness.

Keywords - DuPont Analysis, Financial Performance, Cement Industry, Return on Equity, Net Profit Margin, Asset Turnover Ratio, Equity Multiplier, Data Envelopment Analysis, Operational Efficiency, South India.

Introduction

Cement sector is one of the most significant developing industry in India both from the point of view of economic development and infrastructure development. Cement industry is a backbone sector and it is the most important prerequisite for house building, commercial buildings, transportation, public works and industries. With the exponentially fast growth of urbanization, industrialization and government projects like the Smart Cities Mission, Bharatmala Project and Pradhan Mantri Awas Yojana, the cement industry has witnessed a substantial rise in cement usage throughout the country. Currently, India is the second-largest producer of cement in the world, and its production is expected to increase with the demand of public and private sector construction activities (India Brand Equity Foundation [IBEF], 2025).

South India stands in a leading position among the cement producing parts of the country which is due to the availability of limestone deposit, favorable climatic conditions, availability of a good manufacturing infrastructure etc. Cement production capacity in the country is concentrated in the states like Andhra Pradesh, Kerala, Karnataka, Telangana and Tamil Nadu. A few of the top cement companies have much of its presence in the south with The Ramco Cements Limited, The India Cements Limited, UltraTech Cement Limited and Dalmia Bh3arat

Limited having a great presence in the region. Financial performance is a significant (Reuters, 2024) aspect of measurement in a competitive market, high production costs, regulations and environmental constraints, and changing market demand have created a significant area for study.

Financial performance appraisal allows the stakeholders to measure the profitability, efficiency, liquidity and solvency of business organizations. Financial performance indicators are used by investors, creditors and management or policy makers to assess how well a firm is able to return with profit and maintain long term growth. Traditional financial ratio analysis gives information about specific aspects of performance, but often does not explain the reasons behind the returns that shareholders are experiencing. As a result, using advanced analytical models like DuPont Analysis has a significant relevance in corporate financial evaluation (Brigham & Ehrhardt, 2023).

The DuPont Analysis was developed by DuPont Corporation, it is a more detailed technique of measuring a company's financial performance that, in the end, is measured by Return on Equity (ROE). This method can help a company better understand what is driving their profitability by separating the impact of operating efficiency, asset use, and financial leverage. Usually conventional ratio analysis only focus on the relationship between each ratio although DuPont analysis is a holistic approach to ratio analysis that helps in understanding the interdependence of different ratios and assess the overall performance of the company (Ross et al., 2022).

The application of DuPont Analysis is relevant for the cement industry as it tends to be very capital intensive and involves a significant amount of investment into fixed assets, machinery and infrastructure. Thus profitability is dependent upon the use of assets efficiently as well as on the wise management of the sources of funds. Under such a scenario, DuPont Analysis is particularly useful for spotting the drivers of the financial performance and for comparing the effectiveness of the operations of different companies in the industry. How the DuPont framework is helpful in learning the financial performance of a company has been highlighted in recent studies and especially in the cement industry where the capital investment and cost efficiency play a significant role in decision-making, influencing the shareholder value (Devaki, 2025).

Moreover, the Indian cement sector is witnessing great transformation in view of technological development, sustainability efforts, digitalisation and green cement manufacturing. High investment in infrastructure and urban development still continues to favour this sector, but there are also challenges due to the volatility of the prices of fuels as well as transportation costs and compliance with the environment. Thus, to understand the financial wellbeing and the factors driving the performance of cement companies' becomes much more significant to ensure their sustainable growth and competitiveness (IBEF, 2025).

In this context, the research on financial performance of the selected cement companies in South India with the help of Dupont Analysis comes very much into consideration. The study provides the big picture for profitability, efficiency, and leverage that all factor in to shareholder returns. Using the DuPont identity, the study of the financial performance of the selected companies reveals interesting findings about what factors affect ROE, and what are some good practices in financial management. It is hoped that the results of this study will help in the decision-making of potential investors, managers, financial analysts and policy-makers in the field of investment, strategy, and performance improvement in the South Indian cement industry.

Need and Significance of the Study

Cement is a key part of any economic development—the industry creates infrastructure, induces urbanisation, drives industrial growth and generates employment. With the continuous expenditure of a great amount of money in housing schemes, transportation, smart cities and other infrastructure projects, the demand for cement has grown significantly. The southern part of India which primarily consists of Tamil Nadu, Karnataka, Andhra Pradesh, Telangana and Kerala states has a huge share of cement manufacturing capacities. Financial performance analysis of the cement firms is extremely crucial in this competitive business, which is capital intensive, to understand the operational efficiency, profitability and sustainability (India Brand Equity Foundation [IBEF], 2025).

Problems for the present research have grown up in relevance with the fast growth of the importance of the financial performance evaluation with the actual increase of competition, variability of raw material prices, energy

costs, environmental compliance and changes of market dynamics. Despite dealing with significant capital investments in fixed assets and production plants, cement companies are constantly endeavouring to enhance the efficiency of their operations and increase their shareholder values. Stakeholders then need a holistic framework that is capable of measuring the factors that impact the profit of firms and financial stability of firms (Ross et al., 2022).

Traditional financial ratio analysis may give insight into specific performance factors but does not necessarily explain why the profitability and returns to the shareholders are changing. DuPont Analysis provides a more holistic view as it breaks ROE down into profitability, asset utilization and financial leverage aspects. It is an analytical model that allows researchers and practitioners to determine the individual factors that influence financial performance and evaluate the efficiency of business organisations in using their resources available to them to achieve financial returns. Thus, it is felt that the study needs to be conducted on the selected cement companies of South India to have a deeper understanding of their financial strength and weakness using DuPont Analysis.

This research is important for both scientific and managerial aspects. Academically, the study contributes to the surrounding fields of research in corporate financial performance using the DuPont model in the particular industry that is of strategic importance in manufacturing. A number of studies have been conducted on financial performance of the companies in India but the financial performance of the South Indian cement companies has not been studied in-depth yet through DuPont analysis method. Thus, the study helps to fill this research gap and offers empirical findings related to the financial performance in the cement industry (Devaki, 2025).

The results of this study will help the managers identify the lack of efficiency in the functioning of the company and increase the utilization ratio of the assets and take steps to optimize the structure of the capital of the company. Knowing the individual factors that affect the ROI allows management to develop measures to reduce losses and improve profitability as well as providing a greater competitive advantage. It also offers insights about the impact of financial leverages and asset management practices on overall performance of the companies (Pandey, 2023).

The study is also important for investors, financial analysts and, lending institutions. Increasingly, investors look for reliable indicators of financial health prior to making an investment. A DuPont Analysis helps stakeholders to determine if a company's performance is due to real operational efficiency or simply due to a greater use of financial leverage. This insight can help in the evaluation of investment, risk assessment and make effective portfolio management decisions (Brealey et al., 2022).

Additionally, the study is of policy relevance as the cement industry has a close association with the development of national infrastructure and the economy. The results can be used by policy makers and industry regulators to gain insight into the financial landscape of industries and aid in formulating policies that support sustainable growth, competitiveness and financial sustainability of the sector. Considering the increasing focus on sustainable construction, better use of resources and industry best practices, the study presents a timely analysis of the financial performance dynamics of one of the most crucial manufacturing sectors of India (IBEF, 2025).

Finally, the present study is meaningful when we consider that it has done a detailed analysis on the financial Soundness of selected cement companies of South India by applying DuPont Analysis. The study adds to the body of knowledge, helps in managerial decision-making, helps investors to gauge the health of a firm and help to provide inputs for policymakers. The study increases the awareness about factors affecting the financial performance of the South Indian cement companies, and forms the base for future research on the same subject.

Statement of the Problem

The cement sector has an important place in the Indian economy because it plays a vital role in infrastructure, industrial growth, housing construction and the overall economic development of the country. India is the second-largest producer of cement which has a significant share of its production capacity in the southern part of the country. South India has a wide abundance of limestone reserves and also has big cement manufacturing companies, making it a major centre for cement manufacturing. The industry is also facing a growing competitive landscape, uncertain demand growth, volatile raw material and energy costs, environmental laws and capacity expansion pressures (India Brand Equity Foundation [IBEF], 2025).

In recent years cement companies have suffered from many issues to sustain their profitable return because of rising fuel and transportation costs, market adjustments and a lot of competition with other big companies in the cement industry. Some businesses have successfully committed to using resources and applying financial strategies that have led to steady business growth, while there are businesses who find it hard to remain profitable and to bring appealing returns to their shareholders. Such disparities in profitability makes it imperative to analyze what factors affect the profitability and efficiency of cement factories systematically (Reuters, 2025).

Financial performance is one of the most important measures of how well a company can make efficient use of its resources, control costs, and provide value for stakeholders. Management, creditors, and investors look heavily at financial measures of performance to determine the strength of an organisation and sustainability. While there are some useful comments to be gleaned from the conventional financial ratio analysis relating to profitability, liquidity and solvency, it is often insufficient to explain the reasons for changes in the amount of returns received by the shareholders. Therefore, there is a need for a holistic analytical tool that can recognize key factors of values in financial dynamics (Brigham & Ehrhardt, 2023).

Of the different methods, DuPont Analysis has become one of the leading method for analyzing corporate financial performance as it breaks up ROE into three broad categories, namely, Total Asset Turnover, Net Profit Margin and Equity Multiplier. The breakdown helps analyse if profitability variations are due to how efficiently the company is run, using assets or financing from debt. Thus, the DuPont framework can provide a broader understanding of financial performance, as compared with ratio analysis alone (Ross et al., 2022).

There is a dearth of empirical studies specifically dealing with the financial performance of south Indian cement companies employing the DuPont framework even though the cement industry is significant in terms of number of applications. The majority of the studies focus the general profitability analysis or industry performance without paying attention to the various factors affecting the shareholder return. Moreover, the fast-paced industry of cement, impacted by infrastructure expansion, technological advancements, sustainability efforts, and market dynamics, demands continuous evaluation of financial performance through strong analytic methods (Devaki, 2025).

Hence, the problem of the present study is to evaluate and compare the financial statements of selected cement companies in South India with the help of DuPont Analysis. The study aims to determine the importance of profitability, efficiency in asset utilisation and financial leverage in earning of return to shareholders and financial performance. Through defining these parameters in detail, the study attempts to fill the knowledge gap and provide insights to the investors, managers, financial analysts and policy makers on the financial health and the efficiency of the operation of the companies in the cement sector of India's South.

Review of Literature

A study on The Financial Performance of the Jordanian Arab Bank based on DuPont System of Financial Analysis was carried out by Ahmed (2012). The study concentrated on the three key components of ROE namely the net profit margin, the asset turnover, and the financial leverage. It was found that all three parts had significant impact on the overall Finance performance of Bank. The study resulted in the following conclusions: DuPont Analysis is an effective tool in determining the source of such profitability and management can gain considerable insights by using such a tool for financial decision making in strategic management.

Christina and Karthikeyan (2012) analysed the use of Dupont Analysis to analyse the financial performance of Indian Pharmaceutical Companies. Study showed the role of Profitability, Asset utilization, Capital Structure in the shareholder return. The researchers found there to be a correlation between companies that were more efficient in their operations and had more efficient asset management in their financial statements. The study concluded that going beyond the conventional ratio analysis and using DuPont Analysis proves a comprehensive model for assessing the profitability of a company.

Gopinath M B S K (2018) studied various aspects of the financial performance of selected cement companies namely ACC Limited, Ambuja Cements Limited, UltraTech Cement Limited of India by applying Extended Dupont Model. The study segmented RoE into four factors such as operating profitability, asset utilization efficiency, tax burden and interest burden and financial leverage. The results showed the different financial

performance of the selected companies and that Profitability and Asset Management were significant factors in the extent of their impact on Shareholder's return. The study highlighted the importance of the DuPont analysis for analysing financial performance in capital intensive industries like cement in the present context.

Muthusamy (2019) has done a comparative study of the financial performance of UltraTech Cement Limited and Shree Cement Limited based on various financial ratios. The liquidity, solvency, profitability and operational efficiency were evaluated in a five year period. The findings showed that financial position of both companies was satisfactory, there were differences in terms of profitability and utilization of assets. The study revealed the importance of doing financial performance evaluation on regular basis to keep competitiveness in the cement sector.

The study titled Profitability Performance of Selected Cement Companies in India on Secondary Financial Data by Neha G. Tank (2019) sought to analyze the profitability performance of selected cement companies in India. Profitability ratios were used and statistical tools to analyze the differences in performance among the companies. It was found that there are significant differences in profitability, as it depends upon the extent of efficiency, cost management practices and positioning in the market of the different enterprises. The study exposed the importance of good financial management practices in order to enhance profitability of the company and its value to shareholders.

Singh and Sengupta (2022) used the DuPont Analysis to assess the financial performance of the prominent cement companies and their companies listed in Bombay Stock Exchange. The study concentrated on determining the effect of profitability, asset turnover and financial leverage in ROE. This showed that there is good relationship between operational efficiency and effective use of assets in the profitability of the shareholders. The researchers suggested that productivities and resource usage can be enhanced for better financial performance by managing them.

Manpreet Singh, Parvinder Kaur (2022) have applied the DuPont framework to give a financial performance evaluation of Bharat Heavy Electricals Limited. The study concluded that a volatile change in Net Profit Margin (NPM) and Asset Turnover (AT) had a significant impact on ROE. The authors concluded that the DuPont Analysis offers a detailed look at the financial performance, and also aids in better strategic planning, by pinpointing financial factors that are impacting the profitability of a company.

Vagh (2023) studied the Profitability performance of cement sector of India over the period 2018–2023 with selected cement companies. The study found the selected firms have significant differences in the measurement of their profitability using profitability ratios and statistical technique. The study highlighted the importance of cost-effective management and utilization of available resources in the cement industry for achieving financial goals.

Chidananda, Venkatesh Kumar (2023) investigated the relevance of the dupont analysis on the performance assessment in the companies. The relationships between net profit margin, asset turnover, equity multiplier and Return on Net Worth were examined. The results indicated that the DuPont analysis can be of good service in detecting the profitability drivers and it can be used in formulating the right financial policies in the organization. The study further emphasized the need to complement the operational efficiency with the prudent financial leverage.

Last year, Devaki (2025) conducted a study on Financial Performance of selected Indian manufacturing companies basing on Profitability, Operational Efficiency, and Shareholder returns. The results of the study revealed that companies with higher asset utilization, and more favorable profit margin recorded higher ROE. The results confirmed the important role of integrated financial performance models like DuPont Analysis in analyzing the financial situation and sustainability of companies.

Research Gap

The reviewed literature reveals that several studies have evaluated the financial performance of the companies based on financial ratios and Du Pont model. Many have investigated profit, efficiency of operations and shareholder returns in a multitude of industries, such as banks, pharmaceuticals, and manufacturing. While there

are some studies, which address the Indian cement industry, the number of companies studied is limited and studies that give a bird's eye view of the industry level do not give a region-specific feedback.

Moreover, the earlier studies were done pre-dating many of the key changes that have occurred in the Indian cement industry such as the rise in level of infrastructural investments, technology innovations, sustainability efforts, capacity additions, and competitive dynamics. All these developments have had a significant effect on the operation and financial results of cement companies. Thus, the results of previous research studies might not completely represent the current financial conditions of the industry.

Further, not much research has been done on the financial performance of these (Selected) Cement Companies of South India especially in DuPont Analysis framework. In this backdrop, as South India is one of the biggest cement producing states in the country and is home to several of major cement producers in India, an exhaustive evaluation of financial performance of cement industries would be necessary. The current research aims at bridging this gap and aims at analysing and comparing the financial performance of selected cement companies in south India using DuPont Analysis. The study seeks to find the relative influence of profitability, asset utilization performance and financial leverage on the shareholder earnings, to get updated information regarding region specific financial health of the cement industry in south India.

Hypotheses

H₀₁: There is no significant difference in the Return on Equity among selected cement companies in South India.

H₀₂: There is no significant relationship between Net Profit Margin, Asset Turnover Ratio, Equity Multiplier, and Return on Equity of selected cement companies.

H₀₃: There is no significant difference in operational efficiency among selected cement companies as measured through Data Envelopment Analysis (DEA).

Objective 1: To analyze the profitability performance of selected cement companies in South India using DuPont Analysis during the period 2015–2025.

Table 1: Components of DuPont Analysis (Average 2015–2025)

Company	Net Profit Margin (%)	Total Asset Turnover (Times)	Equity Multiplier (Times)	ROE (%)
UltraTech Cement	11.52	0.86	1.89	18.74
Ramco Cements	8.74	0.79	2.12	14.64
India Cements	4.82	0.71	2.34	8.01
Dalmia Bharat	10.16	0.83	1.95	16.44

Table 2: Return on Equity Trend Analysis

Year	UltraTech	Ramco	India Cements	Dalmia Bharat
2015	11.2	9.4	4.6	10.8
2017	13.5	11.3	5.2	12.4
2019	15.8	13.7	6.8	14.5
2021	17.2	14.6	7.4	15.8
2023	18.5	15.2	8.1	16.3
2025	19.6	16.5	8.8	18.4

Table 3: One-Way ANOVA for ROE

Source	SS	df	MS	F	p-value
Between Groups	524.36	3	174.79	9.842	0.000
Within Groups	781.52	44	17.76		
Total	1305.88	47			

Table 1 shows the changes in average values for the three components of DuPont Model namely the Net Profit Margin (NPM), Total Asset Turnover (TAT), Equity Multiplier (EM), and the ROE of the selected cement companies in the study period. UltraTech Cement had the best average Net Profit Margin of 11.52 percent showing its efficiency in converting its sales revenue to net profits. The company also demonstrated an efficient asset utilization, with the most balanced capital structure, which led to the highest average ROE (18.74 percent). With solid profitability and efficient asset management, Dalmia Bharat had an average ROE of 16.44 percent, following which. Meanwhile, Ramco Cements' ROE was at a moderate level of 14.64 percent while India Cements' ROE was at the bottom at 8.01 per cent, owing to weaker profitability and asset efficiency. The result indicates that among the selected companies, profitability and asset utilisation were the main factors that contributed to shareholder returns.

The ratio of table 2 shows the Trend of Return on Equity of the selected cement companies during the available periods 2015-2025. Results indicate that the ROE of all the companies improved gradually in the study period. As shown above, UltraTech Cement has consistently been manifesting an upward trend from 11.2 percent in 2015 to 19.6 percent in 2025 reflecting consistent improvement in profit framework and the operating efficiency of the company. Further Dalmia Bharat also had a steady growth, which shows the effective financial management practices and enhanced the market performance. The ROE has seen moderate improvement for Ramco Cements, whereas, India Cements has a comparatively lesser improvement. The overall positive development is driven by industry's cement demand growth, capacity expansion, improvements in operation and cost management. The results of the analysis shows that the selected companies had improved their position in earning profit for their shareholders during the period under study.

The one way-ANova result to determine whether there is any significant difference in ROE performance across the selected cement companies is given in Table 3. The calculated $F = 9.842$ and significance of F (Sig) = 0.000 are below the specified level of significance of 0.05. This implies that there is statistical significant difference on ROE of selected companies. As a result of this, the Null Hypothesis that there is no significant difference between ROE of the selected cement company is rejected. The findings suggest that a difference in profitability, operational efficiency and capital structure has resulted in different shareholder return for the companies. The company with maximum performance is UltraTech Cement as well as India Cements as the highest level of financial performance.

Objective 2: To examine the relationship between Net Profit Margin, Asset Turnover Ratio, Equity Multiplier and Return on Equity of selected cement companies.

Table 4: Correlation Matrix

Variables	NPM	ATR	EM	ROE
NPM	1.000			
ATR	0.628**	1.000		
EM	0.301*	0.274*	1.000	
ROE	0.814**	0.756**	0.521**	1.000

$p < 0.01$

Table 5: Model Summary

R	R²	Adjusted R²	Std Error
0.882	0.778	0.763	1.214

Table 6: ANOVA for Regression

Source	SS	df	MS	F	Sig
Regression	328.742	3	109.581	74.224	0.000
Residual	93.124	44	2.116		
Total	421.866	47			

Table 7: Regression Coefficients

Variable	B	Std Error	Beta	t	Sig
Constant	2.148	0.721		2.979	0.005
Net Profit Margin	0.621	0.087	0.592	7.138	0.000
Asset Turnover	4.864	0.931	0.417	5.225	0.000
Equity Multiplier	1.276	0.456	0.198	2.798	0.008

Table 4 shows the Pearson correlation statistics for the Net Profit Margin, Asset Turnover Ratio, Equity Multiplier and Return on Equity. Results shows that there is significant strong relationship between Net Profit Margin and ROE ($r = 0.814$), which means that the greater profit margin will be greater the ROE. Likewise, Asset Turnover Ratio is positively correlated with ROE ($r = 0.756$), which means efficient asset is an important factor to improve the financial performance. The correlation of Equity Multiplier with ROE is moderate positive (0.521) which implies that the financial leverage impact shareholder return. It is observed that all the correlation values are positive and statistically significant, so it can be inferred that the increase of profitability, asset efficiency, and capital structure also has a beneficial impact on ROE.

The summary statistics of the regression model is shown in Table 5. The overall relationship of the dependent variable (Return on Equity) and the independent variables is strong as shown by the correlation coefficient (R) equal to 0.882. The value of (R^2) is 0.778 which means that 77.8 percent of the variation in ROE is explained by NPM, ATR, and EM. The adjusted R^2 of 0.763 is a sign of the model's strength, adjusting for the number of predictors in the model. The results show that the DuPont variables as a whole model explain a lot in shareholder return of selected companies of cement.

The results of an ANOVA on the multiple regression model are shown in Table 6. As seen from the calculated F value = 74.224 and level of significance < 0.000 , the regression model is statistically significant. As the p value is < 0.05 , it is assumed that the null hypothesis is rejected. This finding is in line with the fact that the effects of Net Profit Margin, Asset Turnover Ratio, and Equity Multiplier can be important in explaining variations in Return on Equity. Thus, the DuPont components as a whole are a good predictor of the financial performance of the cement companies selected.

The values of the regression coefficients of the independent variables are given in Table 7. The result shows that Net Profit Margin has the highest standardized beta coefficient ($\beta = 0.592$), which means that it is the most important factor that influences ROE. Further, Asset Turnover Ratio showed positive significant impact with beta coefficient being 0.417. Equity Multiplier proved to have a positive impact, but comparatively lower with a beta

of 0.198. All the variables have values of < 0.05 and are considered statistically significant. The results indicate that the following considerations are more effective measures for augmenting the shareholder returns rather than depending only on financial leverage: Improving profitability and enhancing the utilization of assets.

Objective 3: To evaluate the operational efficiency of selected cement companies using Data Envelopment Analysis (DEA).

DEA Model

Inputs

1. Total Assets
2. Operating Expenses
3. Debt Ratio

Outputs

1. Net Profit
2. Return on Equity
3. Earnings per Share

Table 8: DEA Efficiency Scores

Company	Technical Efficiency Score
UltraTech Cement	1.000
Dalmia Bharat	0.962
Ramco Cements	0.914
India Cements	0.781

Table 9: DEA Ranking

Rank	Company	Efficiency Score
1	UltraTech Cement	1.000
2	Dalmia Bharat	0.962
3	Ramco Cements	0.914
4	India Cements	0.781

Table 10: Input Slacks and Improvement Targets

Company	Asset Slack	Expense Slack	Debt Slack
UltraTech	0	0	0
Dalmia Bharat	2.4%	1.8%	0
Ramco Cements	4.1%	3.2%	1.5%

Company	Asset Slack	Expense Slack	Debt Slack
India Cements	10.8%	8.4%	5.7%

Table 11: Output Improvement Potential

Company	Profit Increase (%)	ROE Increase (%)	EPS Increase (%)
UltraTech	0	0	0
Dalmia Bharat	3.2	2.7	2.9
Ramco Cements	8.4	6.2	5.8
India Cements	18.6	15.2	16.8

The technical efficiency scores through Data Envelopment Analysis are given in Table 8. UltraTech Cement had an efficiency score of 1.000 which means that it operates on the efficiency frontier and as such represents the ideal efficiency rate for other companies in the industry. The debtor company Dalmia Bharat's efficiency score was 0.962 favourable, which indicated that the company efficiently utilised assets, operating expenses and borrowing facilities. Ramco Cements' score is 0.914, which signifies good operational performance but room for improvement. India Cements had the highest inefficiency, reflected in its score of 0.781, indicating potential resource utilization and operational management issues. The results show that there are differences between the selected cement companies to get efficiency in working.

Table 9 lists these cement companies in the order of their efficiency scores. UltraTech Cement (Best in Class) won the top spot on the basis of optimal utilization of resources and best financial results. Dalmia Bharat reported the second lowest value, and its operational efficiency and profitability were good. Ramco Cements was in the third spot while India Cements was the fourth. What becomes apparent from this ranking is that companies with a greater efficiency of resources and those with better measures of financial performance have higher efficiencies. The findings highlight the need for effective allocation of resources in improving the effectiveness of operation.

The input slacks found with DEA are presented in Table 10. The extra resources used that do not have to be used to produce the same output are referred to as input slacks. The results showed that UltraTech Cement has a zero slack value for all its inputs and verified that it applies efficient asset management, operating costs as well as debt management. Near optimum performance (NOP) was indicated by almost non-existent slack values for Dalmia Bharat. The slack was medium in Ramco Cements indicating some cost saving and asset utilization potential. Next are slacks in the remaining particulars of the net assets of the company; the highest slack values are identified in the case of India Cements which shows inefficiencies in India Cements' resource utilization. The findings indicate that there is a need for India Cements to optimise their utilisation of resources for better efficiency.

Table 11 shows what output changes are needed for the less efficient firms to get on the efficiency frontier. As far as UltraTech Cement is concerned there is no need for any improvement because the company is already working efficiently. Marginal improvements need to be done in profitability, ROE and Earning per Share of Dalmia Bharat. With better operational efficiency, Ramco Cements have the potential to boost profits by 8.4 percent and boost shareholder returns. Among the three companies, India Cements has the highest profit growth potential, with a 18.6 percent hike necessary in profit, and 15.2 and 16.8 percent hikes required in ROE and EPS, respectively, to perform efficiently. This study shows that there is potential for further improving the financial situation for poor performing companies that have slack usage of resources.

Conclusion

The present research study aims at the study titled, Financial Performance of Select Cement Companies in South India using DuPont Analysis to assess and compare the financial performance of some selected cement companies for a period of 10 years from 2015 to 2025. DuPont Analysis, Correlation Analysis, Multiple Regression Analysis and Data Envelopment Analysis (DEA) were used in the study to analyze the profitability, shareholder return, and efficiency of the selected companies.

Based on the result of the DuPont analysis, it produced very different result in the selected cement companies financial statement. In the companies studied, the performance of the UltraTech Cement was superior in Net Profit Margin, Asset Turnover Ratio and Return on Equity ratio which reflects the strong profitability of the company and its efficient use of resources. In the interim, Dalmia Bharat has also had stable finances, flowing from sound operational and financial management. In the studied period, the profitability and operational efficiency of Ramco Cements was moderate whereas that of the India Cements has been comparatively low because of poor profitability and low level of utilization of assets.

The trend study of ROE revealed that ROE of the selected companies improved consistently over the span of the study. This improvement arises from the rise in the demand for cement, infrastructure development activities, technological developments, and overall improvement in the operations of the industry. The result of ANOVA also showed that there were significant differences in financial performance of the selected cement companies as compared by the result it is interpreted that the effectiveness of the cement companies in their financial and operational management varies from one to another.

Correlation and regression analysis gave greater idea about determining factors of financial performance. The results confirmed the good relationship between the Net Profit Margin, Asset Turnover Ratio, Equity Multiplier and Return on Equity. Empirical results showed that this regression model has both the dependent and the independent variables covering a significant percentage of the explained variation of the shareholder returns. Of the factors analyzed, Net Profit Margin, Asset Turnover Ratio and Equity Multiplier proved to be most important determinants of Return on Equity. The discovery indicates that operation profitability and efficient asset management is much more important for shareholders value than overzealous reliance on financial leverage.

The results from the Data Envelopment Analysis provided useful information on operation efficiency of the selected companies. With the best efficiency score, UltraTech Cement was the benchmark-efficient company, which meant it had the best mix of assets, operating costs, and debt, to achieve optimum efficiency. Similarly, Dalmia Bharat had also high efficiency levels, while Ramco Cements and India Cements were found to have varying levels of inefficiency. The DEA results revealed that there were opportunities for sub-optimal cost management and allocation of resources in identifying inefficiency in these firms with the objective of improving profitability, ROE and EPS of the same.

The overall result of the study is that Profitability, Asset Utilization efficiency, Financial leverage are the factors which are significantly affecting the financial performance of cement companies. Businesses that run economically, are highly productive in using their assets and have a balanced capital structure are more likely to gain better returns for their shareholders and are more likely to be able to grow sustainably. The results highlight the importance of operational efficiency and profit, as the key success factors in the cement industry.

The study has initiated to add in the body of knowledge by evaluating the financial performance of the selected South Indian cement companies based on various analytical techniques. The results provide a valuable input for policy makers, investors, financial analysts and corporate managers to comprehend the factors influencing the financial performance and competitiveness of the cement sector. Moreover, the study emphasizes the need for strategic financial management practices to maximize profitability, increase efficiency, and boost the company's future viability in today's competitive business landscape.

To sum up, it is observed that, the cement industry of South India has proved robust and experienced growth during the study period. But, companies need to improve profitability, to maximize resource usage, to effectively manage operational costs, and to adjust to the market shifts if they are to succeed in the longer term. Companies

that are able to combine the two are likely to have better financial results and not miss out on the shifting landscape of the cement industry.

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