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A STUDY ON FINANCIAL PERFORMANCE EVALUATION OF SELECTED CEMENT INDUSTRY IN INDIA USING DU-PONT MODEL

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ABSTRACT
This study attempts basically to measure the financial performance of different cement Industry in India for the period 2020-2021 to 2024-2025 by applying Du Pont model. DuPont Analysis break down Return on Equity (ROE) into three components: Net Profit Margin, Asset Turnover, and Equity Multiplier. Six selected Cement industry are used as a sample and data are collected from articles, journal and financial reports. Statistical tools such as average and standard deviation have been used to interpret the data. Hypothesis has been tested by using Two- way ANOVA. The study examined the impact of net profit margin, assets turnover and equity multiplier on ROE by using DuPont approach. The Return on Equity analysis showed that Dalmia Bharat Ltd and JSW Cement Ltd consistently decreased over the analysis period while Others industries like UltraTech Cement, Ambuja Cement, Shree Cement, J.K cement had shown consistence or positive performance in return on equity. However, there are notable difference among the industries in terms of profitability, stability and financial leverage. Overall the study provides valuable insights into the financial performance of the studied Cement industry.

KEYWORDS: *DuPont Approach, Financial Performance, Cement Industry*

INTRODUCTION
Financial performance evaluation is needful for assessing the efficiency, profitability, liquidity, and sustainability of any industry. In order to examine or evaluate the financial performance of any company, there are various financial ratios, among them one of the productive, efficient and effective ratios would be Return on Equity (ROE) which is also known as DuPont analysis. DuPont analysis was developed by F. Donaldson Brown in the year 1914, who worked as an electrical engineer in the treasury department of the DuPont Corporation. DuPont Analysis break down **Return on Equity (ROE)** into three components: Net Profit Margin, Asset Turnover, and Equity Multiplier.

DuPont Analysis (ROE) = Net profit margin* Asset Turnover* Equity Multiplier

Where,
Net Profit Margin = Net profit / Total sales *100
Asset Turnover = Total sales / Total assets
Equity Multiplier (Financial Leverage) = Total Assets / Shareholders' equity
The decomposition of ROE allows investors, stakeholders and also company to detailed examination of operational efficiency, profitability and Financial leverage that also help to find out the key drivers of ROE and to find out strength and weakness for utilizing its resources. Cement is a global commodity manufactured at different states in India. India is the second largest cement producer in the world after China. The Indian cement industry is among the greenest globally with a focus on producing blended cement. With sound economic growth and infrastructure development the demand for cement is on an upward trend. The market is dominated by a few large players like UltraTech cement, Ambuja Cement, Shree cement, J. K Cement, ACC Limited, Dalmia Bharat etc. The major goals of financial statement analysis of any firm should be on the measuring financial performance from the viewpoint of owners' wealth maximization. Various measurement tools and ratios are used mainly for that purpose. In this research paper, an attempt has been made to present DuPont approach to measure financial performance of Indian Cement Industry. Although there are several studies available on the financial performance of Cement industry using DuPont Model and ratio analysis. But this study provides valuable perceptivity into a company's financial performance by examining different aspects of profitability, stability and efficiency.

LITERATURE REVIEW
Mahamuni and Jumle (2018) have conducted a study on Profitability of Mahindra and Mahindra Ltd. Using Du Pont Model. The research paper used the T-test for analyzing and comparing 5 years' financial data from 2010 to 2014 to determine the significant change level. It is concluding by the researchers that Mahindra and Mahindra Ltd. Showed better performance in terms of Assets Utilization, Operating Efficiency and maintaining Financial Leverage.

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Sing and Sengupta (2022) have conducted a study on Financial Performance of the Cement Industry using Du Pont Analysis. The main aims of this study is to investigate the impact of profit, assets turnover and leverage ratio of ROE. A sample of 10 companies was analysis over the period of 10 years. The study concludes that companies not depend on their market share and do not able to retain their performance due to different environmental factors.

Silambarasan et al. (2022) have done a research study on Financial Performance of Ultratech Cement using Du Pont Model. The main aims of this study is to analysis the financial performance of Ultratech Cement Industry with the help of Du Pont model over the period of 10 years. The study concludes that Du Pont model plays an important role in resolving the financial health of the company through ROE. It can be seen that the company's performance is good and has shown a good trend position of net profit margin, equity multiplier and ROE.

Dave and Amin (2023) have conducted a study on Profitability Performance of selected Power Companies by Using Du Pont Model. This study aims to analyze different performance indicator like NPM, ROA, FL, AT and ROE using Du Pont model of selected power companies. The researchers have used five company as a sample and 10 years' financial data was analyzed. The study concludes that the company's overall performance is good. The internal strength of Tata power company is more effective through optimal capital gearing and reduce financial expenses.

Kishori and Padmavathi (2024) made a research study on Selected Automobile Companies to Analysis Financial Performance Using Du Pont Framework. According to this research article Maruti Suzuki stands out as the best in terms of net profit margins, assets turnover, and financial leverage, which result in an impressive ROE and ROA. On the other side Apollo Tyers and Eicher motors exposed poor financial performance, facing challenges in terms of assets and financial leverage that reduce their overall return on capital.

Banu and Hussain k (2025) made a research study on Financial Performance Evaluation of HDFC Bank Using Du Pont Analysis. This study aims to describe how the bank's Return on Equity (ROE) is influenced by the Net Profit Margin, Assets Turnover and Financial Leverage from the period 2020 to 2025. This study concludes that the company revealed significant improvement in profitability, efficiency and ROE. The improvement of ROE during this period was largely driven by a strong net profit margin and effective financial leverage.

OBJECTIVES OF THE STUDY

The main objectives of the present research study are –

1. To evaluates a financial performance of selected cement industry in India by applying Du Pont model.
2. To analyses the performance indicators like NPM, AT, FL and ROE by using Du Pont Analysis of selected Cement industry in India.

RESESRCH METHODOLOGY

This chapter contains a detailed summary of different steps that have been taken up in achievement of the objectives of the present study.

RESEARCH DESIGN

The present study is analytical in nature, as the researcher tried to analyze the performance of selected cement industry in India with the help of various ratios like net profit margin, assets turnover, financial leverage and ROE.

RESEARCH SAMPLE

Following cement industry have been selected for study

1. UltraTech Cement Limited
2. Ambuja Cement Limited
3. Shree Cement Limited
4. J.K Cement Limited
5. Dalmia Bharat Limited
6. JSW Cement Limited

SOURCE OF DATA: Secondary data has been used for the current study which is collected from articles, journal and the official website of cement industry.

PERIOD OF STUDY: The current study has been done to analyze the financial performance of selected cement industry in India by applying Du Pont model. A five-year period commencing from 2020-21 to 2024-25 has been considered for study.

DATA ANALISIS TOOLS: Statistical tools such as average and standard deviation have been used to interpret the data. Hypothesis has been tested by using Two- way ANOVA.

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RESULTS AND DISCUSSION

Table 1 (Net Profit Margin)

Company / Years	UltraTech Cement Limited	Ambuja Cement Limited	Shree Cement Limited	J.K Cement Limited	Dalmia Bharat Limited	JSW Cement Limited
2020-2021	12.20	12.74	16.98	10.64	11.81	6.46
2021-2022	13.94	7.22	15.56	8.50	10.34	5.01
2022-2023	8.01	7.69	7.10	4.31	3.87	2.10
2023-2024	9.84	14.21	11.67	6.83	5.80	2.38
2024-2025	7.96	14.68	5.82	7.33	5.00	-1.12
Average	10.39	11.31	11.43	7.52	7.36	2.97
St. Dev	2.36	3.21	4.43	2.07	3.13	2.61

Source: Money control

The above table 1 shows the net profit margin for different cement industry over a period of five years, from 2020-21 to 2024-25. Shree Cement Ltd had maintained the highest average positive net profit margin ratio throughout the years with 11.43. In 2024-25 all the companies maintained positive net profit margin except JSW Cement Ltd. Based on lower standard deviation such as J.K Cement had shown more consistent net profit margin ratios over the given period. On the other hand, company with higher standard deviation such as Shree Cement Ltd had experienced more variability in their profitability.

Two- way ANOVA was applied to find the significant difference in respect of Net Profit margin among the companies and in different time periods. The ANOVA result are presented in the bellow table 1a.

Table 1a

ANOVA						
Source of Variation	***SS***	***df***	***MS***	***F***	***P-value***	***F crit***
Rows	155.7299	4	38.93246	6.16241	0.00212	2.866081
Columns	264.4524	5	52.89048	8.371749	0.00021	2.71089
Error	126.3547	20	6.317733			
Total	546.5369	29				

Source: Calculated through MS Excel

The computed value of F between the rows represents different time periods. As the calculated F-value was higher than the critical F value, we reject the null hypothesis, indicating that there is a significant difference between the means of the different time periods. The computed value of F between columns represent different companies. The F value of 8.371749 which is higher than F critical value (F statistic > F critical), we reject the null hypothesis, indicating that there is a significant difference between the means of different industry.

Table 2 (Assets Turnover Ratio)

Company / Years	UltraTech Cement Limited	Ambuja Cement Limited	Shree Cement Limited	J.K Cement Limited	Dalmia Bharat Limited	JSW Cement Limited
2020-2021	0.52	0.41	0.63	0.91	0.48	0.59
2021-2022	0.61	0.79	0.64	0.76	0.01	0.58
2022-2023	0.72	0.49	0.68	0.81	0.54	0.60
2023-2024	0.74	0.57	0.76	0.82	0.55	0.56
2024-2025	0.65	0.48	0.68	0.75	0.48	0.50
Average	0.65	0.55	0.68	0.81	0.41	0.56
St. Dev	0.08	0.13	0.05	0.06	0.20	0.04

Source: Moneycontrol

The above table 2 shows the assets turnover ratio for different cement industry over a period of five years, from 2020-21 to 2024-25. J.K Cement Ltd had maintained the highest average positive assets turnover ratio throughout the years with 0.81, indicating that it efficiently utilized its assets to generate sales revenue. Dalmia Bharat Ltd has the highest standard deviation of 0.20, suggesting that its performance or popularity was varied significantly from year to year. JSW Cement Ltd had the lowest

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standard deviation of 0.04, indicating that its performance had been relatively stable over the years.

Two- way ANOVA was applied to find the significant difference in respect of Assets Turnover Ratio among the companies and in different time periods. The ANOVA result are presented in the bellow table 2a.

Table 2a

ANOVA						
Source of Variation	***SS***	***df***	***MS***	***F***	***P-value***	***F crit***
Rows	0.041613	4	0.010403	0.660054	0.626881	2.866081
Columns	0.455257	5	0.091051	5.77688	0.001857	2.71089
Error	0.315227	20	0.015761			
Total	0.812097	29				

Source: Calculated through MS Excel

The computed value of F between the rows represents different time periods. As the calculated F-value was lower than the critical F value (F statistic < F critical), we fail to reject the null hypothesis, indicating that there is a no significant difference between the means of the different time periods. The computed value of F between columns represents different companies. The F value of 5.77688 which is higher than F critical value (F statistic > F critical), we reject the null hypothesis, indicating that there is a significant difference between the means of different industry.

Table 3 (Equity Multiplier)

Company / Years	UltraTech Cement Limited	Ambuja Cement Limited	Shree Cement Limited	J.K Cement Limited	Dalmia Bharat Limited	JSW Cement Limited
2020-2021	1.95	1.78	1.40	2.64	1.73	3.81
2021-2022	1.67	1.32	1.36	2.64	1.59	4.35
2022-2023	1.68	1.63	1.42	2.83	1.63	4.46
2023-2024	1.67	1.58	1.35	2.76	1.69	4.59
2024-2025	1.89	1.51	1.32	2.74	1.74	5.10
Average	1.77	1.56	1.37	2.72	1.68	4.46
St. Dev	0.12	0.15	0.04	0.07	0.06	0.41

Source: Money control

The above table 3 shows the equity multiplier for different cement industry over a period of five years, from 2020-21 to 2024-25. The equity multiplier for the JSW Cement Ltd showed significant fluctuations over the years, ranging from 3.81 to 5.10. this suggest that it experienced substantial changes in its capital structure and financial leverage. The average equity multiplier was 4.46 indicating a relatively high reliance on debt financing compared to shareholder's equity. It shown a consistent increase in its equity multiplier over the years. The equity multiplier of Shree Cement Ltd consistently decreased over the years except 2022-23, indicating a reduce reliance on debt financing and improve financial stability and it has lowest variability of 0.04 among all the companies.

Two- way ANOVA was applied to find the significant difference in respect of equity multiplier among the companies and in different time periods. The ANOVA result are presented in the bellow table 3a.

Table 3a

ANOVA						
Source of Variation	***SS***	***df***	***MS***	***F***	***P-value***	***F crit***
Rows	0.17022	4	0.042555	0.915693	0.474053	2.866081
Columns	34.58979	5	6.917958	148.8597	4.12E-15	2.71089
Error	0.92946	20	0.046473			
Total	35.68947	29				

Source: Calculated through MS Excel

The computed value of F between the rows represents different time periods. As the calculated F-value was lower than the critical F value (F statistic < F critical), we fail to reject the null hypothesis, indicating that there is a no significant difference

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between the means of the different time periods. The computed value of F between columns represents different companies. The F value of 148.8597 which is higher than F critical value (F statistic > F critical), we reject the null hypothesis, indicating that there is a significant difference between the means of different industry.

Table 4 (Return on Equity)

Company / Years	UltraTech Cement Limited	Ambuja Cement Limited	Shree Cement Limited	J.K Cement Limited	Dalmia Bharat Limited	JSW Cement Limited
2020-2021	12.36	10.96	14.84	18.99	9.74	14.17
2021-2022	14.56	7.44	13.35	15.88	7.29	11.46
2022-2023	9.32	8.14	6.81	9.09	6.62	5.96
2023-2024	11.63	8.62	11.57	14.73	5.03	3.64
2024-2025	8.54	7.79	5.21	14.14	3.93	-4.84
Average	11.28	8.59	10.36	14.56	6.52	6.08
St. Dev	2.16	1.25	3.73	3.21	1.99	6.63

Source: Money control

The above table 4 shows the Return on equity for different cement industry over a period of five years, from 2020-21 to 2024-25. Dalmia Bharat Ltd consistently decreased from 2020-21 to 2024-25. J.K cement Ltd has the highest yearly average growth rate of 14.56 among all the companies. JSW Cement Ltd consistently decreased from 2020-21 to 2024-25 and its standard deviation of 6.63, highest among all the companies indicating that its performance or popularity was varied significantly from year to year. Ambuja Cement Ltd had the lowest standard deviation of 1.25, indicating that its performance had been relatively stable over the years. Ultratech Cement and Shree Cement have shown positive growth in analyzed period and its performance remained relatively stable.

Two- way ANOVA was applied to find the significant difference in respect of Return on Equity among the companies and in different time periods. The ANOVA result are presented in the bellow table 4a.

Table 4a

ANOVA						
Source of Variation	***SS***	***df***	***MS***	***F***	***P-value***	***F crit***
Rows	227.7088	4	56.9272	6.939392	0.00113	2.866081
Columns	254.7671	5	50.95341	6.211191	0.001248	2.71089
Error	164.0697	20	8.203485			
Total	646.5455	29				

Source: Calculated through MS Excel

The computed value of F between the rows represent different time periods. As the calculated F-value was higher than the critical F value (F statistic > F critical), we reject the null hypothesis, suggesting that there is a significant difference between the means of the different time periods. The computed value of F between columns represent different companies. The F value of 6.211191, which is higher than F critical value (F statistic > F critical), we reject the null hypothesis, indicating that there is a significant difference between the means of different industry.

CONCLUSION

The major goal of this article is to use the Du Pont Model to assess the profitability of selected power companies in India. In conclusion, the analysis of various financial ratios for different Cement industry over a five-year period provides valuable insights into their financial performance and stability. The analysis of net profit margin revealed that Shree Cement Ltd maintained the highest average net profit margin indicating consistent profitability. The net profit margin of JSW Cement consistently decreased over the years. In 2024-25 it has a negative performance. While other industries like UltraTech Cement, Ambuja Cement, Dalmia Cement, J.K cement experienced more variability in their net profit margin. In terms of assets turnover ratio, J.K Cement Ltd had maintained the highest average positive assets turnover ratio, indicating that it efficiently utilized its assets to generate sales revenue, while other industries experienced fluctuations. The equity multiplier analysis highlighted the significant fluctuations in JSW Cement Ltd capital structure and financial leverage. The equity multiplier of Shree Cement Ltd consistently decreased over the years except 2022-23, indicating a reduce reliance on debt financing and improve financial stability. Lastly, the return on equity analysis showed that Dalmia Bharat Ltd and JSW Cement Ltd consistently decreased over the analysis period. Others industries like UltraTech Cement, Ambuja Cement, Shree Cement, J.K cement had shown consistence or positive performance in return on equity. However, there are notable difference among the industries in terms of profitability, stability and financial leverage. These perceptivities

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can guide shareholders, investors and stakeholders in evaluating the financial performance and risk profile of the studied Cement industry.

REFERENCES

1. *Banu, T. (2025). A Study on Financial Performance Evaluation of Hdfc Bank Using Du Pont Analysis. International Journal of Creative Research Thoughts, 13(9), 738-748.*
2. *Dave, A., & Amin, A. (2023). Profitability Performance Evaluation of Selected Power Companies by using Du Pont Model. International Journal of Creative Research Thoughts, 11(2), 129-140.*
3. *Dharshini, P., & Priya, P. S. (2025). A Study on the Financial performance of a Logistic Company Using Du Pont Analysis. International journal of Research Publication and Reviews, 6(3), 640-642.*
4. *Dronagiri, S., & Maned, K. (2023). A study on Financial Performance evaluation using DuPont Analysis of Avenue Supermarts Ltd. Global Scientific Journals, 11(9), 399-402.*
5. *Gopi, K. (2018). Financial Performance of Cement Industry in India Using Extended Dupont Approach. Asian Journal of Managerial Science, 7(2), 16-20.*
6. *Kishori, B., & Padmavathi, R. (2024). Using DuPont Framework in Selected Automobile Companies to Analysis Financial Performance. 04(11), 2440-2443.*
7. *Sahare, T., & philip, s. (2018). Du Pont Analysis of Mahindra and Mahindra From year ending 2013 to 2017. journal of Emerging Technologies and Innovative Rresearch, 5(10), 157-161.*
8. *sing, G., & Sengupta, A. (2022). Study of Financial Performance of the Cement Industry by using Du-Pont Analysis. ADHYAYAN : A JOURNAL OF MANAGEMENT SCIENCE, 12(2), 54-58.*