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A STUDY ON PERFORMANCE ANALYSIS OF SELECT CEMENT INDUSTRIES IN TAMIL NADU

Dr. A. ARUMUGAM
PRINCIPAL & HEAD
DEPARTMENT OF COMMERCE
JAIRAM ARTS & SCIENCE COLLEGE
SALEM

M. SASIKALA
ASST. PROFESSOR
DEPARTMENT OF COMMERCE
TRINITY COLLEGE FOR WOMEN
NAMAKKAL

ABSTRACT

The economic development of a country is directly related to the growth of business. Business covers all economic activities, which are undertaken to earn a living. A country's economic and social development will be possible through industry, trade and related activities. The study of business is important to know the position of economic and social development. The study of present position will enable to know the good and weak points of the economy. A country may have sufficient natural resources but still it may have low level of economic development. This will be due to poor planning of the economy.

KEYWORDS

Cement industries, economic development, performance analysis.

JEL CODE

L61

INTRODUCTION

Cement industry in India is at a very critical juncture today. During the five year period of 2007-2012, the industry added around 150 million metric tons (MT) of capacity, taking the total capacity to over 300 mmt". However, demand has not been that strong during last couple of years due to general economic slowdown and lower infrastructures spending. In the short term, this is likely to continue as spending on infrastructure by Government will take some time to revive. Also, demand from real estate-industry's major user segment-is down due to lower affordability and higher home loan rates.

High taxation, rising raw material & transportation costs and higher fuel costs are some of the major challenges faced by the Indian cement industry. "The overall rate of tax on cement is around 30 per cent in India compared to 19 per cent in China and almost negligible in Thailand. Though, companies have tried to lessen transportation and fuel costs using various alternative and technologies, the same are still too high". Costs for cement companies will keep rising over the next few years as coal prices will firm up further and freight costs go up due to rising crude prices. New cement capacities may face the additional problem of not getting assured captive coal linkages.

Apart from these operating costs, the industry is facing challenge of foreign players who are ready to tap the Indian market and so are on acquisition spree. Though, consolidation in the industry is good in the long term as it will enhance competitiveness, efficiency and margins, it may also give them much of the untapped market and pricing power due to their size factor.

A slowdown in the real estate sector too is a challenge. If it persists for an extended period, it would impact the growth in consumption of cement. Most of the cement plants in India use latest technology, yet they are highly energy intensive in nature. Despite the fact that the technology used by Indian cement companies is among the best in the world, more innovation is required to ensure that cement plants are not only environment-friendly, but also low-cost in nature.

OBJECTIVES OF THE STUDY

The present study aims to analyze the operating efficiency of select cement industries in Tamil Nadu. Hence, the following objectives have been framed by the researcher.

1. To study the operational efficiency of select cement industries in Tamil Nadu.
2. To measure the operating efficiency in terms of capacity utilization and consumption norms.
3. To analyze the trends in productivity growth of the selected cement companies
4. To summarise the findings and offer suggestions based on the analysis to improve the overall performance of the select cement industries in Tamil Nadu.

HYPOTHESIS

1. There is no significant difference in the mean net sales among different cement companies during the study period.
2. There is no significant difference in the mean sales and total income, total expenses of selected cement companies during study period.
3. There is no significant difference in the mean sales and profit before depreciation and tax of selected cement companies during the study period.
4. There is no significant difference in the mean sales and reserves, networth, total debt, current liabilities of selected cement companies during study period.
5. There is no significant difference in the mean sales and cost elements of selected cement companies during study period.

LIMITATIONS OF THE STUDY

The study is limited to five cement companies only

1. The data published by the industries were combined in total but not based on the unit wise. Hence, unit study was not made.
2. The results of the study may not be generalized for all the cement industries in India.

REGRESSION ANALYSIS –1

INDIA CEMENTS

Step wise multiple regression analysis of Y- sales turnover, and net sales, Total Income, Total Expenses; Operating profit, PBDIT, PBDT, PBT and NP. was performed with variables the following regression model is fitted for performance

Y = bo + b1X1 + b2 X2 +b3 X3 + ……….

Where b1,b2,……. are partial regression coefficients; bo-constant the results are presented in the following table.

TABLE 1: REGRESSION MODEL

MODEL SUMMARY	
Multiple R	1.000[a]
R Square	1.000
Adjusted R Square	1.000
Std. Error of the Estimate	277438.387

Source: Annual Reports (computed)

The above table 1 shows the value 1.000[a] given under the column R is multiple correlation coefficients. These ***nine*** variables are correlated significantly.

TABLE 2

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1537569608469420	6	256261601411570	3329.281	.000[b]
	Residual	230916175579	3	76972058526	-	-
	Total	1537800524645000	9	-	-	-
Predictors: (Constant= X_1),X_2, X_3, X_4 X_5, X_6, X_7, and X_8, X_9,						

Source: Annual Reports of the Balance sheet

From the above table shows that The step wise multiple regression models indicated that out of the *nonperforming assets* explanatory variables, 9 Variables namely, X_2,X_3, X_4,….. and X_9 have *significantly* contributing to X_1. The analysis of variance of multiple regression models for X_1 indicates the overall significance of the model fitted. The coefficient of determination ***R^2*** value showed that these variables put together explained the variations of Y to the extent of 1.000.

TABLE 3: CO-EFFICIENT

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)	1813005	375201		4.832	.017	618946	3007064
Total income	1.075	.030	.976	35.356	.000	.979	1.172
Operating profit	**1.762**	.242	.418	7.277	.005	.991	2.533
PBDIT	-1.791	.402	-.423	-4.450	.021	-3.071	-.510
PBDT	.178	.249	.044	.716	.526	-.614	.970
PBT	.003	.005	.005	.489	.658	-.014	.019
NP	-.154	.252	-.029	-.609	.585	-.957	.650

Source: Annual Reports (computed)

5% level of significance

The above table 4.3 shows that coefficients; these values are needed to formulate regression equation. The value under column B against constant is the “a” value (Y-intercept) in the regression equation based on Profit and loss account variable of cement companies Ltd is sales turnover (1813005) and operating profit (1.762) define the slope of the regression lines and are the values of b_3 in the multiple regression equation.

Hence, the multiple regression equation is formulated as

Y= 1.075 +1.762-1.791+.178+.003--.154

REGRESSION ANALYSIS –2

CHETTINAD CEMENTS

Step wise multiple regression analysis of Y- sales turnover, and net sales, Total Income, Total Expenses; Operating profit, PBDIT, PBDT, PBT and NP. was performed with variables the following regression model is fitted for performance

Y = bo + b1X1 + b2 X2 +b3 X3 + ……….

Where b1,b2,……. are partial regression coefficients; bo-constant the results are presented in the following table

TABLE 4: REGRESSION MODEL

MODEL SUMMARY	
R	.992[a]
R Square	.984
Adjusted R Square	.951
Std. Error of the Estimate	1640150
Change Statistics (R Square Change)	.984
F Change	30.25
Sig. F Change (df1,6) (df2,3)	.009

Source: Annual Reports (computed)

The above table 4 shows that themodel summary[b], the value 992[a] given under the column R is multiple correlation coefficients. These ***nine*** variables are correlated significantly.

TABLE 5

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	488254713085159	6	81375785514193	30.250	.009[b]
	Residual	8070277390841	3	2690092463614		
	Total	496324990476000	9			
Predictors: (Constant= X_1),X_2, X_3, X_4 X_5, X_6, X_7, and X_8, X_9,						

Source: Annual Reports

The above table 5 shows that, The step wise multiple regression models indicated that out of the *nonperforming assets* explanatory variables, 9 Variables namely, X_2,X_3, X_4,….. and X_9 have *significantly* contributing to X_1. The analysis of variance of multiple regression models for X_1 indicates the overall significance of the model fitted. The coefficient of determination ***R^2*** value showed that these variables put together explained the variations of Y to the extent of.984.

TABLE 6: COEFFICIENT

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)	-408590	2843615.97		-.144	.895	-9458245	8641064
Total income	1.391	.719	1.034	1.935	.148	-.897	3.679
Operating profit	4.121	3.552	1.107	1.160	.330	-7.184	15.426
PBDIT	-1.212	7.876	-.334	-.154	.887	-26.278	23.854
PBDT	-2.192	7.071	-.516	-.310	.777	-24.696	20.311
PBT	**9.910**	17.355	1.119	.571	.608	-45.321	65.141
NP	-15.118	25.874	-1.241	-.584	.600	-97.462	67.226

Source: Annual Reports (computed)

5% level of significance

The above table shows that 4.41 coefficients; these values are needed to formulate regression equation. The value under column B against constant is the “a” value (Y-intercept) in the regression equation based on Profit and loss account variable of cement companies Ltd is sales turnover (-408590) and profit before profit (9.910) define the slope of the regression lines and are the values of b_3 in the multiple regression equation. Hence, the multiple regression equation is formulated as

Y= 1.391+4.121-1.212-2.192+9.910-15.118

CONCLUSION

On the basis of critical evaluation of operational efficiency of selected cement companies, it is observed that the operational efficiency of sample companies is generally not satisfactory. Higher cost of production, high demand, low productivity. The correlation and regression used for this study. In recent years, the government of India has given to both direct and indirect encouragement to the cement industry and boom them cement industry. There is no significant difference in the mean sales and cost elements of selected cement companies during study period A slowdown in the real estate sector too is a challenge. If it persists for an extended period, it would impact the growth in consumption of cement. Most of the cement plants in India use latest technology, yet they are highly energy intensive in nature. Despite the fact that the technology used by Indian cement companies is among the best in the world, more innovation is required to ensure that cement plants are not only environment-friendly, but also low-cost in nature.

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