Growth Analysis And Performance Ranking Of Select Indian Fertiliser Companies

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Abstract

Empirical evidences from the developed and few emerging economies have shown that the producing unit of the economy tends to influence the entire economy's performance and stability. But, without adequate finance, incentive of operations, business friendly environment, effective management and operation structure, growth-oriented governmentpolicies and regulations, the manufacturing firms' will not perform as expected. The degree to which firm growth ismore/less random is studied in the context of how the size composition of firms and innovation patterns change. This paper was designed to study the performance of selected Indian Fertiliser Industry. To achieve this objective, performance of selected companies on five key parameters over the period from 2002 -2011 was taken into account for ranking viz: size (a function of the total assets and net revenue), growth in net revenue, growth in net profits, profitability (profit margins) and total average returns. The results showed that irrespective of the size of the company the profitability and returns were on the good record. Content flabby, large companies had increasingly seen their businesses melt in the face of competition from small players who change the dynamic and rules of the market through boldness. The empirical research has suggested that firm growth is determined not only by the traditional characteristics of size and age but also by other firm-specific factors such as indebtedness, internal financing, future growth opportunities, process and product innovation, and organisational changes.

Key Words: Growth Analysis; Equity Base, Performance Score, Profitability Score.

INTRODUCTION

The fertilizer industry presents one of the most energy intensive sectors within the Indian economy and is therefore of particular interest in the context of both local and global environmental discussions. The purpose of the study is to know about the fertilizer sector, to study the growth of fertilizer industry in India. Chemical fertilizers have played a vital role in the success of India's green revolution and consequent self-reliance in food-grain production. The increase in fertilizer consumption has contributed significantly to sustainable production of food grains in the country. The Government of India has been consistently pursuing policies conducive to increased availability and consumption of fertilizers in the country.

The Indian fertilizer industry had a very humble beginning in 1906, when the first manufacturing unit of Single Super Phosphate (SSP) was set up in Ranipet near Chennai with an annual capacity of 6000 MT. The Fertilizer & Chemicals Travancore of India Ltd. (FACT) at Cochin in Kerala and the Fertilizers Corporation of India (FCI) in Sindri in Bihar were the first large sized -fertilizer plants set up in the forties and fifties with a view to establish an industrial base to achieve self-sufficiency in food grains. Subsequently, green revolution in the late sixties gave an impetus to the growth of fertilizer industry in India. The seventies and eighties then witnessed a significant addition to the fertilizer production capacity. The growth of the fertilizer industry was at its peak in the 1970s and 1980s. The growth was a bit stagnant in the last decade of the 20th century. But, with many radical steps been taken by the Government of India, the industry is expected to grow again.

Today, India stands as the third largest fertilizer consumer and producer of the world. It has been observed that the subsidies on Indian fertilizer have been rising at constant rate. This is due to the rise in the cost of production and the inability of the government to raise the maximum retail price of the fertilizers. The population of the country is rapidly increasing at 1.5% annually. This requires higher production of food grains. The total cropped area is only 30% of the net geographical area, which is not enough for increasing the agricultural productivity. Now, the main focus is on the improvement of the farm income, for which the fertilizer industry needs to lay more stress on the agricultural activities in the country. This will also help to improve terms between the government agencies and the fertilizer industry in India.

Literature Review

The growth and performance of an industry is an important dimension, irrespective of its significance in the macro perspective. Optimization of growth may be the goal or an instrument to achieve some other goals like maximization of profit, sales, economies of scale etc.

Baumol(1962) in his growth model argues that growth is primarily desired as a means to greater profitability. The industry seeks to achieve higher growth in the short run and that will ensure sustainable return in the long run. For a small company, survival depends on efficiency, agility, ability to grasp new opportunities and implementing them effectively.

Growth in volume of business represents the changes similar to capacity utilization in a manufacturing enterprise. Growth in volume of business is likely to generate more revenue and hence a direct bearing on profitability of the organization. A review of empirical literature **(Dessand Robinson, 1984)** shows that the most used measures for growth have been compounded annual growth rate of sales and total assets.

Vijaya Kumar (1998) examined the "Determinants of corporate size, growth and profitability of Indian Corporate Sector". The objective of the firm was profit maximization and the firm which expanded its output earned the highest profit and was therefore, considered the optimum firm. Each firm had several objectives and each decided its own policies. An attempt had been made in this paper to study the relationship between the size, profitability and growth.

The techniques of average, correlation and linear and multiple regression analysis had been used in this study. It can be concluded from the analysis that growth is found to be significantly associated with profitability during the study period. The outstanding influence of size, return on networth, retention and long-term borrowings / net assets is highlighted.

Size is expected to be an important determinant of firm's performance. Size can have a positive effect on firm's performance, since larger firms can leverage their size to obtain better deals in financial as well as product or other factor markets **(Mathur and Kenyon, 1998)**. This variable may be important if economies of scale operate. Size as measured refers to total assets employed in the business. Growth in size is expected to reflect the direction of change in operating efficiency.

Sridevi (2002) studied the variability in profit ratios, growth in profitability of public sector manufacturing industries belonging to steel, minerals, metal, coal and power industry after liberalization. Globally, particularly since the 1970's large corporations have primarily focused on turning themselves into oligarchs and reducing competitions to the point where profits are easy and the future assured as **John Ralston Saul(June, 2005)** writes in "The Collapse of Globalism".

The availability and cost of finance are often twin factors that affect the ability of a business to grow**(Binks &Ennew, 1996)**. The growth of firms, both large and small, is constrained by the quantity ofinternally generated finance available **(Oliveira &Fortunato, 2006).**

Buffers andLintner (1945) providesome of the earliest research to support this theory. They conclude that many large and small companies-even companies with promising growth opportunities find it extremely difficult or impossible to raiseoutside capital on reasonably favourable terms and that most firms finance their growth almostexclusively through earnings. Financial factors (such as liquidity constraints, availability of external finance and access to foreignmarkets) can have a significant impact on firm's investment decision. If financial factors significantlyimpact on firms' investment decisions, then they are likely to affect firm size and growth as well **(Fagiolo&Luzzi, 2004).**

Aregbeyen (2007) in a related research investigated the determinants of firm growthselected from the Nigerian firms that are quoted on the Nigerian Stock Exchange (NSE). Thestudy sampled 188 firms for the period of 1995-2005. The results obtained reveal that for themanufacturing firms, size of the firms, capital intensity, foreign equity holding, governancestructure, inflation, financial constraints and vertical integration are significant in explainingthe firms' growth rate. Contrary to postulations of the theory the result obtained showed thatthe more financially constraints the manufacturing firms are, the better the growthperformance.

METERIALS AND METHODS

To construct the sample, all the listed and unlisted Indian Fertiliser Companies in CAPTALINE database (63 companies) were taken into consideration. From the total population the following companies were excluded:

- The public sector companies - as their policies are highly influenced by a large number of social obligations and policy decisions of the government, which may be difficult to account for.

- Unlisted companies - because they do not follow the norms set by SEBI for financial reporting

- Those companies which do not have the financial coverage in database over the period of study

- Those companies, which have undergone merger and demerger during the study period.

So, after the above exclusions the final sample consisted of only 17 companies. The study covers a period of ten years from 2001-2002 to 2010-11. However for the sake of simplicity, financial year 2001-2002 will henceforth be referred to as 2002 and financial year 2010-11 will accordingly be referred to as 2011. The study is based primarily on the secondary data collected from the electronic corporate database CAPTALINE. The data for the fertiliser industry as obtained from database has been supplemented with information from various financial dailies, business magazines, reports of the companies, websites and so on. Editing, classification and tabulation of the financial data collected from the above mentioned sources have been done as per the requirements of the study.

Variables and Statistical Tools Used

For measuring the growth of select companies, the following parameters were used.

Growth in Total Assets
Growth in Equity Base
Growth in Revenue
Growth in Operating Profit
Growth in Net Profit
Growth in ROCE
Growth in RONWThe simple mathematical tools like ratios and percentages had been used for analyzing the growth of Indian fertilizer industry. Further Annual Compound Growth Rate (ACGR) of each parameter for the period of 10 years was computed.

The underlying model to identify the best performing companies - is analogous to the process of ranking a student on the average of scores obtained in a typical class examination. For calculating the performance score the following five key parameters over the study period were taken into account.

Size score: It was calculated by averaging the asset multiple and revenue multiple

Average of a company's past ten years' total assets

----------x100=Asset Multiple (1)

Sum of past ten years' average total assets of all companies in the sample

Average of a company's past ten years' net revenue

----------x100=Revenue Multiple (2)

Sum of past ten years' average net revenue of all companies in the sample

Size Multiple = Average of asset multiple and revenue multiple (3)

Revenue Growth score: Cumulative average net revenue growth.

Size-adjusted net revenue CAGR=Net revenue CAGR x Revenue multiple

Profit growth score: Cumulative net profit growth.

Average of a company's past ten years' net profits

---------- X100 =Profit Multiple (4)

Sum of past ten years' average net profits of all companies in the sample

Size-adjusted net profit CAGR=Net profit CAGR x profit multiple. (5)

Profitability score: Average of operating profit and net profit.

Return score: It was calculated by averaging the average return on capital employed and average return on net worth.

Performance score: To determine performance ranking, average value of individual parameters were first converted into respective scores. Companies were then ranked on the basis of a weighted-average score of individual scores to arrive the order of best companies.

RESULTS

Growth Dynamics of the Fertilizer Industry – An Analysis of (a) growth in total assets, equity base and revenue

Value of the total assetsat the end of the year includes net fixed assets, net current assets and investments.Equity base consists of equity share capital of the company. Revenue means revenue earned from the main line of business. It excludes other incomes, non-recurring and extraordinary income. The total value of assets, equity base and revenue of the sample companies for each year are considered for the computation of growth indices which are depicted along with annual compound growth rates in Table No. 1.

Table No. 1: Growth in Total Assets, Equity Base and Revenue

(Rs. in crores)

Year	*Total Assets Rs*	*Growth Rate (%)*	*Equity Capital Rs*	*Growth Rate (%)*	*Revenue Rs*	*Growth Rate (%)*
2002	834.56		105.11		577.88	
2003	828.23	- 0.76	104.84	- 0.26	522.52	- 9.58
2004	844.72	1.99	107.95	2.97	666.75	27.60
2005	894.50	5.89	111.41	3.21	823.28	23.48
2006	883.17	- 1.27	111.41	0	891.84	8.33
2007	961.24	8.84	97.99	- 12.05	969.33	8.69
2008	1156.15	20.28	99.88	1.93	1176.55	21.38
2009	1346.03	16.42	100.21	0.33	2143.31	82.17
2010	1422.71	5.70	101.07	0.86	1554.51	- 27.47
2011	1513.98	6.42	100.80	- 0.27	1955.09	25.77
ACGR		**6.84%**		**- 0.46%**		**14.50%**

From Table No.1 it is observed that the growth rate of total assets had increased from – 0.76 % (2003) to 5.89% (2005). The maximum growth rate was 20.28% in the year 2008 and it was negative in the years 2003 and 2006 showing – 0.76% and – 1.27% respectively. The maximum growth rate of equity base was 3.21% in the year 2005 and it was zero in the year 2006. The growths of revenue during the study period show the negative growth of – 9.58% and – 27.47% in the years 2003 and 2010 respectively. The maximum growth rate was 82.17% in the year 2009. The annual compound growth rates of above three variables were 6.84%,- 0.46% and 14.50% respectively.

(b) Growth in profitability

The profitability variables selected for this analysis are operating profit, net profit ROCE and RONW. Operating profit is taken as the difference between net revenue and total operating expenses. The reported net profit of sample companies is considered as the net profit for this study. ROCE is obtained by dividing profit before interest and tax (PBIT) by average capital employed. It is the average of capital employed of all sample companies. PBIT is net income and expense of sample companies after adjusting extraordinary income and expense before interest and tax. RONW is calculated by dividing the mean net profit of the sample companies by average net worth of sample companies. Net profit is adjusted for extraordinary income and expense. The growth index of profitability variables of the sample companies along with its annual compound growth rates are given in Table No.2.

Table No. 2: Growth in Profitability

(Rs.in crores)

Year	*Operating Profit Rs.*	*Growth Rate (%)*	*Net Profit Rs.*	*Growth Rate (%)*	*ROCE (%)*	*Growth Rate (%)*	*RONW (%)*	*Growth Rate (%)*
2002	136.12		18.94		1.48		6.36	
2003	99.51	- 26.90	3.68	- 80.57	7.29	- 36.50	2.16	- 66.04
2004	116.16	16.73	13.92	278.26	9.01	23.59	4.26	97.22
2005	122.86	5.77	28.53	104.96	9.25	2.66	6.46	51.64
2006	155.62	26.66	60.14	110.80	12.25	32.43	4.21	- 34.83
2007	163.08	4.79	80.31	33.54	13.38	9.22	11.42	171.26
2008	207.49	27.23	110.18	37.19	14.89	11.29	13.20	15.59
2009	220.15	6.10	90.98	17.43	13.42	- 9.87	12.76	- 3.33
2010	220.20	0.02	95.92	5.43	12.36	- 7.90	12.17	- 4.62
	266.74	21.14	127.81	33.25	14.62	18.28	14.76	21.28
2011								
ACGR		**7.76%**		**23.63%**		**2.72%**		**9.81%**

Table No.2 shows the growth of operating profit and net profit with negative growth in the first year and tremendous growth rate of 278.26% during the year 2004. The growth of ROCE had shown negative in the first year and also in 2009 and 2010. The maximum and minimum ROCE in percentage was 14.89% (2008) and 7.29% (2003) respectively. RONW exhibited the same trend in tune with ROCE. The annual compound growth rates of these variables were very reasonable at 7.76%, 23.63%, 2.72% and 9.81%.

PERFORMANCE RANKING

Companies' performance on five key parameters over the period from 1998 to2007 was taken into account for ranking viz., size (this was a function of the total assets and net revenue),growth in net revenue, growth in net profits, profitability (profit margins),and total average returns. Size of the company was deduced by taking a simple average in net revenue and total assets. In case of the sales and profit growth parameters , compounded annual growth rate(CAGR) for the ten years was taken into account. While calculating profitability, a simple average of net profit margins operating net margins were taken. Similarly, to calculate the returns, a simple average return on capital employed (ROCE) and return on net worth (RONW) was used.

Table No. 3 PERFORMANCE RANKING - FERTILISER COMPANIES

		COMPANY SIZE				GROWTH DYNAMICS				PROFITABILITY		RETURNS		
**P. Rank	Name of Companies	Total Assets 2010-11	Total Revenue 2010-11	Avg. Asset &Rev	Size Rank	Revenue Growth Adjusted CAGR%	Rank	Net Profit Growth Adjusted CAGR%	Rank	Average Profit Margin%	Rank	Total Avg Returns%	Rank	*P Score
1	Coromandal	3397.24	3769.74	13.68	2	578.33	1	738.29	1	323.81	3	135.015	2	357.83
2	Tata	7536.28	4219.30	23.99	1	394.56	2	508.47	2	592.69	1	72.87	7	318.46
3	Chambal	4242.46	2876.99	13.19	4	159.44	4	303.14	5	375.05	2	72.18	9	184.72
4	Zuari	2140.79	2889.26	11.14	5	268.82	3	306.66	4	143.52	6	68.59	10	159.75
5	Oswal	1934.33	562.34	8.33	6	-94.38	17	498.23	3	95.63	7	79.84	5	113.54
6	Deepak	1651.05	917.562	4.83	8	65.94	7	156.76	6	158.37	5	105.83	3	98.35
7	Nagarjuna	3171.03	1697.98	13.36	3	111.91	6	79.33	7	105.46	4	35.89	15	85.13
8	Mangalore	698.75	1406.29	5.09	7	129.24	5	72.96	8	53.99	8	62.18	12	64.69
9	Aries	205.72	93.78	0.43	13	8.87	10	14.93	9	9.33	11	153.52	1	37.36
10	phosphate	17.37	33.83	0.51	12	2.09	15	0.23	12	0.81	17	99.92	4	20.71
11	T.Stanes	62.93	131.08	0.53	11	4.64	12	6.86	10	5.71	12	72.22	8	17.99
12	Basant	111.49	86.78	0.17	16	7.91	11	6.72	11	5.59	13	64.95	11	17.07
13	Teesta	55.05	52.10	0.24	14	2.67	14	-5.19	13	3.25	14	43.96	14	8.99
14	Shiva	72.31	56.18	0.23	15	3.15	13	-15.25	14	2.08	15	52.08	13	8.46
15	Bharat	23.18	7.77	0.05	17	0.64	16	-25.54	15	1.98	16	21.63	17	-0.26
16	Kaltan	270.52	266.53	0.75	9	17.05	9	-165.50	17	17.64	9	79.13	6	-10.19
17	Liberty	147.13	151.56	0.55	10	19.93	8	-163.24	16	12.15	10	34.24	16	-19.28

*** P. Score: Performance Score** **** P.Rank: Performance Rank**

Table No.3 portrays the performance in terms of total assets, net revenue, net profit, return on capital employed and return on net worth. As per the revenue grouping Coromandal International ranked first followed by Tata Chemicals and Zuari Industries. Aries Agro had the good returns among the companies even though it ranked nine out of seventeen companies. Tata Chemicals had the good asset base (7536.28 croes) among the companies.

Other Aspects of Excellence

In orderto identify and acknowledge companies, which have recorded outstanding performance in competition and wealth creation perhaps the key business differentiators today, ranking has been done on wealth creation and competition aspects also.

Wealth Creators

Outstanding and consistent wealth creators among the sample companies were determined based on growth in their market capitalization over the past seven years. The process involved for ranking the companies is on the basis of absolute wealth created each year. The main ranking was then determined from the weighted average of individual rankings for the period under consideration.

Table No. 4

Top Wealth Creators

(Rs. in crores)

Name of the Company	2005	2006	2007	2008	2009	2010	2011	Avg.
Tata	3619.56	3851.35	3614.91	6023.84	7331.20	7182.04	7536.28	5594.17
Chambal	2389.00	2124.99	3001.34	2605.38	3758.74	4207.85	4242.46	3189.97
Coromandal	727.87	933.75	1121.47	1908.94	2898.71	3424.98	3397.24	2058.99
Zuari	949.47	1204.97	1641.07	1701.94	1254.61	2125.04	2140.79	1573.98
Deepak	585.10	571.60	836.92	860.47	1231.88	1309.53	1651.05	1006.65
Kaitan	100.45	152.23	176.68	180.81	176.61	199.85	270.52	179.59
Aries	30.72	39.44	55.73	109.45	149.59	175.23	205.72	109.41
Liberty	27.96	41.9	43.03	47.63	80.06	98.63	147.13	69.48
Basant	31.55	35.62	49.39	62.95	78.05	84.77	111.49	64.83
Teesta	32.52	35.96	35.69	43.56	34.63	47.66	55.05	40.72
Shiva	13.75	13.72	23.88	30.89	39.34	55.29	72.31	35.60

Table No. 4 shows Tata Chemicals has grown well its wealth during the year 2008, Chambal during 2009. Aries has doubled its wealth of Rs.109.45 crores in the year 2008. Other companies started their wealth creation from 2006 onwards.

CONCLUSION

The following are the specific observations of the study:

Coromandal International ranked first followed by Tata Chemicals and Zuari Industries.

Aries Agro had the good returns among the companies even though it ranked nine out of seventeen companies

Tata Chemicals had the good asset base among the companies.

Increases in productivity through the adoption of more efficient and cleaner technologies in the manufacturing sector will be most effective in merging economic, environmental, and social development objectives. A historical examination of productivity growth in India's industries embedded into a broader analysis of structural composition and policy changes will help identify potential future development strategies that lead towards a more sustainable development path.

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