FACTORS EFFECTING VALUE GENERATING CAPABILTY OF THE SAIL

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ABSTRACT: The paper attempts to analyze the factors that have impact on value generating capability of the SAIL. Besides, this study examines the trends of effecting factors. This paper also examines impact of value generating capability on earning capacity of the SAIL. This study is totally based on secondary data. Data have been collected from published Annual report of the SAIL. The period of study is 10 years from 2008-09 to 2017-2018.The study identifies that the fixed assets management itself affecting the value generating capability of the SAIL whereas working capital management and fixed asset management have jointly impact on value generating capability of the SAIL on the basis of the obtained results. There is positive relationship between the ROCE and VACE of the SAIL during the period of the study. Value generating capability of the SAIL has significant impact on earning capability and among the determinants of value generating capability fixed assets management plays a vital role on enhancing the company's value generating capability.

Key words: SAIL**,** working capital management**,** fixed asset management and value generating capability.

1. INRODUCTION

The value generating concept is very significant tool for appraising the performance of any organization because it helps to indicate wealth creation and application by the organization during a particular period of time. It recognizes various contributors and claimants such as shareholders, employees, government, finance institute etc. who have contributed for generating value and get corresponding share therein. Without generating value survival of any firm is hardly possible and to grow in competitive business environment. Optimizing value generated is more superior to optimizing profit because it gives rewards to company as well as provides capital too. A sound value generation can design a good quality of incentive schemes. Profit planning programme and appropriate allocation of resource can be planned in the light of value added amount.

This concept basically comes from manufacturing unit wherein the firm's raw materials convert into finished goods. Steel Authority of India Limited (SAIL) is one of the important manufacturing firms because it belongs to the Maharatna category. We know that the steel industry will continue serve as an economic booster to the development of country not only for our country but also other countries of the world too.

2. LITERATURE REVIEW:

Maji, SK. and Sur, D. (2014) they had made a comparative study on value generating capabilities of the NTPC Ltd during the period of post and pre -liberalization. They revealed that the value generating capability of NTPC Ltd. is more significant in post-liberalization than pre-liberalization.

Sur, D. and Chakraborty, K. (2015) aimed to analyzed financial performance of the BHEEL. They taken value added to capital ratio as dependent variable to ascertain the impact of determinants value generating capabilities. They concluded that working capital management had visible impact value generating capabilities of the company.

Yudawisastra, HG. et.al, (2017) worked on different dimension of value added capital. They concluded that value added capital employed has no impact on financial performance measure.

3. OBJECTIVES THE STUDY

The present study goes to know a relationship between value generating capabilities with its determinants during the period of study. More specifically, the study seeks to examine the following issues:

i.　To assess the value generating capabilities of SAIL.

ii.　To analysis determents of value generating capabilities of the company.

iii.　To examine the relationship between value generating capabilities and its determinants of SAIL.

iv.　To assess the joint impact of the determinants on the value generating capabilities during the period of the study.

v.　To know the impact of value generating capability on earning capacity.

4. RESEARCH METHODOLOGY

Secondary data obtained from published Annual report of SAIL was used. The period of study is 10 years from 2008-09 to 2017-2018. To analyze the data and establish a relationship of value generating capabilities with working capital management, fixed asset management and profitability measurement; value added to capital employed ratio(VACE), working capital turnover ratio(WCTR), fixed asset turnover ratio (FATR), net profit ratio (NPR) , return of asset, return on capital(ROCE) employed have been used. These ratios are used because value generating capabilities of any company mostly depends on management of working capital and management of fixed assets and good added value effect on profitability. Therefore, in order to fulfill the objectives it has assumed that VACE=f (FATR, WCTR),

 During the course of analysis various accounting and statistical tools and techniques have been adopted. Accounting techniques involves accounting ratio and statistical tools like descriptive statistics, t test, F test, Pearson, liner regression, multiple correlations, multiple regression have been used as and when required in order to analyze data and to draw logical inferences.

5. ANALYSIS AND DISCUSSION OF DATA

Table 5.1: Analysis of selected ratio Steel Authority of India limited (SAIL)

YEAR	WCTR (times)	FATR (times)	VACE (%)	NPR (%)	ROA (%)	ROCE (%)
2008-09	2.18	3.51	68.21	14.28	24.1	34.7
2009-10	1.56	2.98	49.82	16.63	22.0	31.1
2010-11	1.93	2.83	40.15	11.48	13.9	21.7
2011-12	3.11	2.67	46.56	7.76	9.2	21.0
2012-13	3.44	2.62	44.70	4.94	5.4	17.5
2013-14	4.4	1.73	40.28	5.66	6.1	14.2
2014-15	4.2	1.25	31.64	4.63	4.9	9.14
2015-16	8.2	0.84	13.35	(-)10.45	(-)9.7	4.30
2016-17	12.1	0.87	17.12	(-)6.45	(-)7.5	1.30
2017-18	10.5	0.97	21.78	(-)0.84	(-)1.3	8.70
Minimum	1.56	0.84	13.35	(-)10.45	(-)9.7	(-)4.30
Maximum	12.1	3.51	68.21	16.63	24.1	34.70
Average	5.16	2.027	37.36	4.76	6.71	15.50
Slop of the trend line	1.17	(-)0.32	(-)5.03	(-)2.52	-3.42	(-)3.77
t value	5.85**	(-)10.19	(-)6.19**	(-)5.28**	(-)6.82**	(-)6.22**

 **Significant at 5.00 per cent level

Source: Compiled and computed from published annual report of SAIL during the period of 2008-09 to2017-2018

WCTR: It helps to measure the efficiency of the organization in managing its investment in working capital and working capital management is the one of elements of value generating capabilities of the organization. The higher is WCTR, the higher is the efficiency of working capital management of the company and vice versa. Table-1 shows that the WCTR of SAIL varied between 1.56 in 2009-10 and in 12.1 in 2016-17. The mean value of WCTR of the SAIL during the period of study is 5.162. The linear trend equation fitted to the WCTR series reveals an increasing trend which has been found statistically significant throughout the period under study.

FATR: It helps to measure the efficiency of the organization in managing its fixed assets and fixed assets management is the one of elements of value generating capabilities of the SAIL. The higher is the FATR, the higher is the efficiency of working capital management of the SAIL and vice versa. Table-1 discloses that the FATR of the SAIL varied between 3.51 in 2008-09 and 0.84 in 2015-16 during the period of study. The mean value of the SAIL, i.e., FATR for the study period is 2.027. The trend line fitted to the FATR series indicates a declining trend which has not statistically significant.

VACE: It helps to measures the wealth generating capability of the SAIL. The higher of the VACE indicates the greater capability to generate wealth of the SAIL. VACE of SAIL varied between 13.35 percent in 2015-16 and 68.21 percent in 2008-11 during the period of study. The mean value of the SAIL, i.e., VACE for the study period is 37.36 percent. The trend line fitted to the VACE series indicates a declining trend which has been found statistically significant.

NPR: It helps to measure firm's profitability performance. Table-1 discloses that the NPR of SAIL varied between 16.6 percent in 2009-10 and (-) 10.45 percent in 2015-16 during the period of study. The mean value of the SAIL, i.e., NPR for the study period is 4.76 percent. The trend line fitted to the NPR series indicates a downward trend which has statistically significant.

ROA: It indicates the earning capability of the SAIL. The higher ROA indicates efficient utilization of company's fund. Table-1 discloses that the ROA of SAIL varied between 24.10 percent in 2008-09 and (-) 9.70 percent in 2015-16 during the period of study. The mean value of the SAIL, i.e., ROA for the study period is 6.71 percent. The trend line fitted to the ROCE series indicates a decline trend which has statistically significant.

ROCE: It helps to measure the earning capability of the SAIL. The higher ROCE indicates efficient utilization of company's fund. Table-1 discloses that the ROCE of SAIL varied between 34.70 percent in 2008-09 and (-) 4.30 percent in 2015-16 during the period of study. The mean value of the SAIL, i.e., ROCE for the study period is 15.50 per cent. The trend line fitted to the ROCE series indicates a downward trend which has statistically significant.

Table 5.2: Analysis of relationship of between VACE and its determinants of SAIL

Partial correlation analysis

Partial correlation coefficient between WCTR and VACE ($r_{WV.F}$) = (-) 0.151

Partial correlation coefficient between FATR and VACE ($r_{FV.W}$) = 0.791**

Multiple Regression Analysis:

Multiple Regression equation: VACE= $\alpha + \beta_1.$WCTR + $\beta_2.$FATR + €

Variables	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	VIF
	B	Std. Error	Beta			
Constant	10.861	13.843		0.785	0.458	
WCTR	(-)0.449	1.114	(-)0.101	(-).404	0. 699	3.778
FATR	14.218	4.163	0.853	3.415	0.011*	3.778
R=0.940ᵃ R²=0.884		Adjusted R²=0.851	Durbin-Watson=1.667 F- statistics= 26.801* Sig.= .001ᵇ			
a. Dependent Variable: VACE b. Predictors: (Constant), WCTR, FATR, ** Sig. at 5% level						

Partial correlation, multiple correlation and multiple regression analysis have used for identifying nature and extent of relationship between assuming factor and value generating capabilities and also knowing   significant contribution of assuming factors towards the value generating capability of the SAIL throughout the period of study as revealed by Table-2 . Table-2 shows that there is positive partial correlation coefficient relation between FATR and VACE (0.791) which is found statistically significant at 5.00 per cent level and there is negative partial correlation between WCTR and VACE which is not statistically significant. In theory of finance and its management, higher efficiency of both working capital and fixed assets management, larger is the value generating capabilities of company (Sur, et. al 2015). The analysis of partial correlation between VACE and FATR conforms to theoretical argument but partial correlation between WCTR and VACE does not confirm theoretical argument.

Table-2 depicts that when one unit of WCTR increase, VACE of SAIL decreased by (-) 4.49 units which is not found to be statistically significant. Table-2 also depicts that one unit increased in FATR, VACE of sail increased by 14.218 units which is found statistically significant at 5.00 per cent level. It again conforms to theoretical argument that higher efficiency of management of fixed assets creates higher efficiency of value generating capabilities. The multiple correlation coefficients (R) of VACE on WCTR and FATR is 0.940 which is statistically significant at 5.00 per cent level. It implies that joint impact of efficiency of working capital management and fixed assets management of the SAIL on its value generating capabilities is noticeable during the period of study. The coefficient of multiple determinations (R^2) as depicts in Table-2 implies that 88.40 per cent of the variation in VACE of SAIL has been contributed by its WCTR and FATR. Adjusted value R^2 signifies that almost 81.5% of the variations dependable variable is explained by the independent variables. Durbin-Watson test statistic is 1.667 that indicates existence of positive auto correlation among the variable since its value is near 2. Table-3 also shows that F statistics (26.801) with probability (0.001) indicates that the regression model is perfectly fitted (i.e., there is possibilities of overall significance impact of independent variable on of dependable variable).

Table 5. 3: Analysis of relationship of between VACE and earning capability ratios of the SAIL

Correlation Measures	Correlation Between		
	VACE and NET PROFIT	VACE and ROA	VACE and ROCE
Pearson	0.898**	0.931**	0.953**
* *Significant at 5 per cent level.			
Source: Compiled and computed from published annual report of SAIL during the period of 2008-09 to 2017-2018			

Table-3 shows that examination of nature and extent relationship of net profit, ROA and ROCE with VACE of the SAIL during the period of study. Table-3 discloses positive as well as high correlations which are statistically significant. Theoretically high Net profit, ROCE, ROA indicate a proper utilization of company's fund. In Table-3 positive and high correlation indicate that company's value generating fund has been efficiently used for making desired earnings.

Table-5.4: Results of Linear Regression Analysis (Dependent variable ROA)

Variable	Unstd. Coefficients		Std.Coefficients			
	B	Std. Error	Beta	t- value	Sig.	VIF
(Constant)	(-)16.578	3.520		(-)4.710	.002	
ROA	0.623	0.087	0.931	7.186	.000	1.000
R=0.931	$R^2 = 0.866$	Adjusted $R^2 = 0.849$	Durbin-Watson =1.495	F- statistics= 51.645		Sig.= 0.000
**Significant at 5 per cent level						
Source: Compiled and computed from published annual report of SAIL during the period of 2008-09 to 2017-2018						

Table-4 revels that positive impact of value generating capabilities of the company on the return on capital employed. Increase of one unit in VACE, the net profit of SAIL during the period of study increased by 0.464 units. Multiple correlation (R) is 0.898 which indicates that net profit is strongly depending on VACE of the SAIL. Adjusted value R^2 signifies that almost 78.2 % of the variations NPR is explained by the VACE variable. Durbin-Watson test statistic is 1.495 that implies an existence of positive auto correlation among the variable since its value is near 2. Table-4 also reveals that the value of F statistics (33.340) with the p value 0.00 which is statistically significant, it implies the regression model is perfectly fitted.

Table 5.5: Results of Linear Regression Analysis (Dependent variable NPR)

Variable	Unstd. Coefficients		Std.Coefficients			
	B	Std. Error	Beta	t- value	Sig.	VIF
(Constant)	(-)12.588	3.265		(-)3.855	.005	
NPR	.464	0.080	0.898	5.747	.000**	1.000
R=0.898	$R^2 = 0.806$	Adjusted $R^2 = 0.782$	Durbin-Watson =1.873	F- statistics= 33.340**		Sig.= 0.000
**Significant at 5per cent level						
Source: Compiled and computed from published annual report of SAIL during the period of 2008-09 to 2017-2018						

Table-5 depicts a positive impact of value generating capabilities of the company on the return on asset. Increase of one unit in VACE, the ROA increased by 0.623 units. Multiple correlation (0.931) indicates that ROA is strongly depending on

VACE of the SAIL. Adjusted value R^2 implies that 84.9% of the variations dependable variable (ROA) is explained by the VACE variable. Durbin-Watson test statistic is 1.495 that implies an existence of positive auto correlation among the variable since its value is near 2. Table-5 also shows that the value of F statistics (51.645) with the p value 0.00 which is statistically significant, it implies the regression model is perfectly fitted.

Table 5.6: Results of Linear Regression Analysis (Dependent variable ROCE)

Variable	Unstd. Coefficients		Std.Coefficients			
	B	Std. Error	Beta	t- value	Sig.	VIF
(Constant)	17.276	2.814		6.140**	0.000**	
Net profit	1.295	0.145	0.898	8.940**	0.000**	1.000
R=0.953	R^2 = 0. 909	Adjusted R^2 = 0.898	Durbin-Watson =1.2.	F- statistics= 79.926**		Sig.= 0.000
**Significant at 5 per cent level Source: Compiled and computed from published annual report of SAIL during the period of 2008-09 to 2017-2018						

Table-6 shows that positive impact of value generating capabilities of the company on the return on capital employed. Increase of one unit in VACE, the ROCE of SAIL during the period of study steeped by 1.295 units. Multiple correlations (0.953) imply that ROCE is strongly depending on VACE of the SAIL. Table-4 revels that 90.90 per cent of variation in ROCE of the SAIL has been contributed by VACE. Adjusted value R^2 signifies that almost 89.80% of the variations dependable ROCE is explained by the VACE variables. Durbin-Watson test statistic is 1.23 that indicates existence of positive auto correlation among the variable since its value is near 2. Table-4 also shows that the value of F statistics (79.926) with the p value 0.00 which is statistically significant, it implies the regression model is perfectly fitted.

6.CONCLUDING REMARKS

This is the final stage for the paper wherein, we can show the outcomes derived from partial correlation, multiple correlations and multiple regressions as carried out in this study imply that there is positive partial correlation between fixed asset management and value generating capability whereas a negative partial correlation has seen between working capital management and value generating capability. This paper concluded that fixed assets management of SAIL itself has made significant contribution towards enhancing value generating capability during the period of study. Again results also showed that working capital management and fixed asset management have jointly impact on wealth creation capability of SAIL. From the results of Pearson correlation, it has been concluded that there is positive as well as strongly high relationship between value generating capability and earning capability of the company. From the analysis of liner regression, it has been concluded that impact of value generating capability of the company is noticeable on earning capabilities.

7. RECOMMENDATION:

After analyzing the data of the company, it has been recommended that the company should take care on the improvement of working capital management system.

8. LIMITATION OF THE STUDY:

There were lacks of information, journal, articles, regarding value generating capability

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