A Study on Determinants of Profitability of Large Scale Paper Companies in Tamil Nadu

Dr. R. GOWRI

Assistant Professor, Vellalar College for Women (Autonomous), Erode.

Abstract: Paper companies play a vital role in the global economy, producing a wide range of products. These companies adopting eco-friendly sources of raw materials and reducing carbon footprints. In Tamil Nadu, Paper companies significantly contribute to local economies by providing employment and supporting relating industries. The present study is aimed at determining profitability of paper companies in Tamil Nadu. The Profitability of paper companies are severely affected by various problems such as high cost of production, acute shortage of working capital, uncertainties in availability of raw materials, non-repayment of loans and interest and absolete technology. It is found that there is an increase in leverage, liquidity and inventory turnover ratio of SPB, the profitability is declined by –0.012, -0.100 and -0.004 units respectively, which is insignificant. There is high degree of negative association with ROCE. But in case of TNPL, the fixed assets turnover ratio is the strongest determinant of profitability followed by operating ratio which is found at 5% and 1% level of significance. Hence the impact of selected variables on profitability viewed positive associations with ROCE. These companies should try to utilize their assets efficiently will increase the profitability and market value of shares.

Key words: GRS-Growth rate of sales, LEV-Leverage (Debt Equity Ratio), ITR-Inventory turnover ratio, ROCE-Return on capital employed.

INTRODUCTION

Paper Industry is highly energy incentive industry. With the rising ability to read and write, education and development, the demand for paper would go on increasing in times to come. This helps to grow the internal market in India, It is the priority sector for Foreign Collaboration and Foreign Equity Participation. It provides employment to more than 0.12 million people directly and 0,34 million people indirectly. It has occupied an important position in the economy in terms of its contribution to national output, employment and exports.

Profitability Analysis

The operating efficiency of the business is measured by the amount of profit generated during the financial year. The profit may be measured by studying the profitability of investment in the business. It depends on the cost incurred for the production of goods. If the cost increases, the profit of the business is reduced. Moreover, the future development of the company can be designed according to the expenses and investment level. So, it is important to analyse the profitability position of the company.

STATEMENT OF THE PROBLEM

The profitability of paper companies are severely affected by a plethora of problems such as high cost of production, acute shortage of working capital, uncertainties in availability of raw material, shortage coal and power, obsolete technology, non-repayment of loans and interest and demand recession. These factors ultimately have an adverse impact on profitability of the paper companies. By keeping this in mind, the present study is made an attempt to determine the profitability of paper companies in Tamil Nadu.

REVIEW OF LITERATURE

Nirali.J Kantharia (2020) in her article "A study on Profitability Analysis of Power generating sector" has evaluated and analysis the growth of power sector with respect to selected company. The methodology adopted was Profitability ratios relating to sales. The conclusion was found that the profitability and growth of power generating firm was satisfactory.

K. Bhavana Raj (2020) in his article, " A study on Profitability Analysis of Indian Telecom Companies" has analysed the Liquidity and Profitability Performance and predict Bankruptcy of selected companies. The conclusion of the study was that Indian Telecom Companies should improve their Liquidity and Profitability Performance so that the sector shows signs of stability.

Siva Priya Sellathurai (2019) in her article "A study on Profitability analysis of Insurance companies" has analyzed the growth and comparison of profitability of the company. The conclusion of the study was

growth of the company depends on how effectively insurers are unable to come up with the product designs suitable to our context.

Objectives of the Study

To study the Determinants of Profitability of Large Scale Paper Companies in Tamil Nadu.

Hypotheses of the Study

There is no significant relationship among the dependent and independent variables.

METHODOLOGY OF THE STUDY

a) Sample Selection: The present study was purely based on secondary data. The required data were collected from the Prowess Database of CMIE (Centre for Monitoring Indian Economy). The number of large scale paper companies in Tamil Nadu are only two. The following are the two companies constitute the sample set for the study

1. Seshasayee Paper and Board Limited (SPB)
2. Tamilnadu Newsprint and Papers Limited (TNPL)

b) Period of Study: The study covers a period of 10 years from 2013-14 to 2022-23

Tools for Analysis

 (i) Ratio Analysis

 (ii) Regression Analysis

In order to determine the profitability of paper companies, Multiple Regression model can be used. The basic model consist of a multiple regression of profitability (p) on a set of independent variables. The profitability is determined as return on capital employed. In this study, the Return on Capital Employed (ROCE) is used as dependent variable. Independent Variable such as Size, Growth rate sales, Operating ratio, Leverage ratio, Liquidity ratio, Inventory turnover ratio and Fixed assets turnover ratios are used

$P = \{b_0 + b_1 \text{ size} + b_2 \text{ GRS} + b_3 \text{ OR} + b_4 \text{ LEV} + b_5 \text{ LIQ} + b_6 \text{ ITR} + b_7 \text{ FTR}\}$
where

P = Ratio of Return on Capital Employed	Size = Total Assets in Log Value
GRS = Growth Rate of Sales	OR = Operating Ratio
LEV = Leverage (Debt Equity Ratio)	LIQ = Liquidity (current ratio)
ITR = Inventory Turnover Ratio	FTR = Fixed Assets Turnover Ratio
b_0 - b_7 = Estimated Coefficient	

The adjusted R^2 was calculated to determine the percentage variation in the dependent variable explained by independent variable.

$$\text{Adjusted } R^2 = 1 - (1 - R^2) \times \frac{N-1}{N-K}$$

N - Number of sample observations
K - Number of parameters.

ANALYSIS AND RESULTS

The results of the individual companies are being described along with the tables.

TABLE -1: Determinants of Profitability of Seshasayee Paper and Board Limited

Variable	B	t	Remarks
(Constant)	.596	1.718	–
Size (Total Assets in Log Value)	.253	2.175	S*
Growth rate of Sales	.000	-2.144	S*
Operating Ratio	-.009	-3.297	S**
Leverage Ratio	-.012	-1.046	NS
Liquidity Ratio	-.100	-1.646	NS
Inventory Turnover	-.004	-1.549	NS
Fixed Asset Turnover	.041	1.966	S*

Source: Computed

** Significant at 1% level; * Significant at 5% level; NS - Not Significant

$R^2 = 0.793$	Adj $R^2 = 0.586$	F = 3.837

To understand the influence of profitability, the linear multiple regression model were used. The table-1 reveals that the relationship between the dependent variable (ROCE) and all the independent variables taken together to determine the profitability of the company. When the size is increased by one unit, the profitability of the company is increased by 0.253 units which is statistically significant at 5% level. When operating ratio is increased by one unit, the profitability of the company is decreased by -0.009 units which is statistically significant at 1% level. When the fixed assets turnover ratio is increased by one unit, the profitability is increased by 0.041 units which is statistically significant at 5% level. When there is an increase in leverage, liquidity and inventory turnover ratio, the profitability is declined by -0.012, -0.100 and -0.004 units respectively, which is insignificant. It is clear that the size is the strongest determinant of profitability followed by fixed assets turnover ratio, growth rate of sales and operating ratio. The co-efficient determination (R^2) is 0.793 which indicates that independent variables contribute nearly 79% of the variation in the profitability. It is 79% and the adjusted R^2 is around 59%.

TABLE -2: Determinants of Profitability of Tamil Nadu Newsprint and Paper limited

Variable	B	T	Remarks
(Constant)	.201	.267	–
Size (Total Assets in Log Value)	.162	.534	NS
Growth rate of Sales	.000	-.690	NS
Operating Ratio	-.008	-4.703	S**
Leverage Ratio	-.037	-.466	NS
Liquidity Ratio	-.013	-.750	NS
Inventory Turnover Ratio	.009	.839	NS
Fixed Asset Turnover Ratio	.095	2.449	S*

Source: Computed

** Significant at 1% level;   * Significant at 5% level;   NS - Not Significant

$R^2 = 0.903$	Adj $R^2 = 0.807$	F = 9.341

The determinant of profitability of Tamilnadu Newsprint and Papers Ltd is studied with the help of multiple regression model. The values indicates that only two variables individually contribute significantly to variations in the ROCE when other variables are kept constant. The operating ratio is negatively correlated and influenced the profitability at 1% level of significance and the fixed assets turnover ratio is positively correlated and influenced the profitability at 5% level of significance. The other variables such as size, growth rate of sales, leverage, liquidity and inventory turnover ratio were found statistically insignificant. It is clear that fixed assets turnover ratio is the strongest determinant of profitability followed by operating ratio which is found statistically at 5% and 1% level of significance. The co-efficient determination (R^2) is 0.903 which shows that independent variables contribute nearly 90% of the variation in the profitability of the company. It is 90% and the adjusted R^2 is around 81%.

CONCLUSION

The financial performance of the selected companies were analysed through profitability ratios. This analysis enables the management to make prompt changes in the financial and production policies. The correlation and multiple regression analysis showed the extent of interrelationship between the dependent and interdependent variables and this make the possible estimation or prediction of profitability of these two companies. In order to increase the profitability, it is suggested to control the cost of goods sold and operating expenses. The companies should try to utilize their assets efficiently and proper utilization of asset will increase the profitability and market value of shares.

REFERENCES

[1] Nirali J. Kantharia , "A study on Profitability Analysis of Power generating sector", International Journal of Research and Analytical Reviews, Volume 7, Issue no.1, March 2020.

[2] K. Bhavana Raj " A study on Profitability Analysis of Indian Telecom Companies", Journal of Critical Reviews, Volume 7, Issue no.8, Januaryn 2020.

[3] Siva Priya Sellathurai "A study on Profitability analysis of Insurance companies", Journal of Current Advanced Research, Volume 8, Issue no.5, May 2019.

[4] Reports of Industry: Market size, shares, Centre for Monitoring Indian Economy , March 2022

Books:
1. Sharma R.K., Shashi Gupta K., Management Accounting: Principles and Practice, Kalyani Publishers, Edition 2021.

2. Gupta S.P., Statistical Methods, Sultan Chand and Sons, New Delhi, Edition 2021.

3. Pandey I.M., Financial Management, Vikas Publishing House Pvt.Ltd., Edition 2021