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The Impact of Capital Structure on Tangible Social Value Added of the Telecommunication Industry in India

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ABSTRACT:

This paper aims to examine the impact of Social Value Added (SVA) on capital structure (CS) with respect to top five companies in the Telecommunication Industry in India. The SVA comprises tangible and intangible value created by the firm; however, the present study focuses only on the tangible value added variables for a period of five years from 2015-16 to 2019-20. The data for the study were collected from the annual reports of the respective samplefirms. The study used correlation and regression analysis for studying the impact of CS on SVA. The results showed that there is a significant impact of the CS on SVA of Telecommunication industry in India.

KEYWORDS:

Capital Structure, Social Value Added Model, Tangible Value Added.

JEL: G32, O35, O14

I.Introduction

I.1 Capital Structure

Capital structure (CS) is a specific blend of debt and equity used by a firm to finance its business activities and development. There must be a balanced proportion of debt and equity in the CS of a firm. The debt includes debentures, bonds, deposits, long-term loans and long-term bank overdrafts; on the other hand, equity consists of paid-up capital, reserves and surplus, profit and loss account (undistributed earnings) and any other claims available for equity shareholders.

I.2 Social Value Added

Social value is the measurement of the relative significance that individuals put on the progressions they experience. It is important to consider and quantify the social value according to the point of view of those impacted by a firm's work. It is an adaption of economic value added, which may be applied infirms engaged in social or cultural activities, supporting their managers in verifying the objectivity of the adopted course of action.

The benefits of afirmis given in terms of its social or environmental influence, which is referred to as social added. In the social economy, demonstrating the SVA is becoming increasingly important as the goals of starting a business are classified into two categories viz. economic goals and social goals. One of the methods for evaluating a company's performance to attain social goals is Social Value Added (SVA), which is an adaption of Economic Value Added (EVA) **(PawetWnuczak, 2018)**[1].The SVA is the aggregate of tangible and intangible value that a firm creates in the society due to technological advances or changes in knowledge of process engineers and managers **(Clair Krizov and Brad Allenby, 2004)**[2]**.**

Further, the SVA is divided into two sections viz. the initial segment, which contains the tangible factors of production including wages, interest, dividend paid, tax and retained earnings **(Riahi Belkaoui, 2003)**[3], and the subsequent part is the intangible factors, which includes environmental impact, social impact, intellectual capital or technological impact and the other industry specific intangible impact. The subsequent part is clubbed to the initial part and thus the SVA is defined as "the sum of the tangible and intangible values which is made by the business unit and is carried onto the general public with the change and headway of innovation and furthermore through the information on Director's and creation Engineers" **(Hemmanti*et al*., 2018)**[4].

I.3 Telecommunication Industry in India

Presently, India is the World's second - biggest media communications market with an endorser base of 1.16 billion and has enrolled for solid developments. The quantity of broadband endorsers rose to 765.1 million in February, 2021. The Indian portable economy is developing rapidly and it will contribute significantly to India's GDP. The Telecommunicationindustry is the third largest area as far as foreign direct investment (FDI) inflows are concerned, contributing 7.1% of complete FDI inflow in India. This sector contributes directly to 2.2 million business and in a roundabout to 1.8 million occupations.The Telecommunication sector is relied upon to contribute 8% to India's gross domestic product (GDP) in 2022 from – 6.5% currently[5].

I.3.1 Government Policies

The policies of the Government of India have been instrumental alongside solid customer interest in the quick development in the Indian Telecommunication Industry. The Government have empowered simple market admittance of telecommunication gear and a reasonable proactive structure that has guaranteed accessibility of telecommunication services to shoppers at reasonable costs. This sector is considered to be one of the quickest developing and the main five business opportunity generators in the country.

The Union Cabinet (Government of India) approved ₹.12,195 crore (US$ 1.65 billion) production-linked incentive (PLI) scheme for telecommunication and networking products under the Department of Telecommunications. To drive the development of 6G technology, the Department of Telecommunications (DoT) has developed a sixth generation (6G) innovation group.

I.3.2 Increasing investment in the Telecommunication Industry

In 2021-22, the Department of Telecommunications has been allocated ₹.58,737 crore (US$ 8 billion), out of which 56% allocation is towards revenue expenditure and the remaining 44% is towards capital expenditure. The FDI inflow in the telecommunicationindustry stood at US$ 37.79 billion between April, 2000 and June, 2021[6].

II. Review of Literature

Dimitris Kyriazis and Christos Anastassis (2007)[7], in a research work entitled "*The Validity of the Economic Value Added Approach: An Empirical Application*" investigated the relative explanatory power of the economic value added (EVA) model with respect to stock returns and firms' market value, compared to established accounting variables in the context of a small European developing market. The study used variables viz. 'annual abnormal return', 'net income', 'operating income', 'residual income', 'economic value added', 'net operating profit after taxes' and 'invested capital'. The data used in the study included the financial statements and adjusted stock prices of 121 non-financial publicly traded Greek firms covering a period of eight years from 1996-97 to 2002-03. The study used sensitivity analysis and found that 'economic value added' (EVA) did not seem to have a stronger correlation with firms' stock return.

PawetWnuczak (2018)[8], in a research paper entitled "*Social Value Added (SVA) as an adaption of Economic Value Added (EVA) to the specificity of Cultural Institutions*" presented the concept of social value added (SVA) as a tool for measuring the effectiveness of the activity of non-profit cultural institutions. The study covered several successive modifications of economic value added (EVA), which eventually led to the measure of Social Value Added (SVA). The parameters represented the difference between 'social impact' of an evaluated institution and the 'social cost of capital' involved in the conducted activity. The study used cost-benefit analysis and found that applying social value added (SVA) in cultural institutions may facilitate the process of management and the measurement of effective utilization of resources of the entities.

Mohsen Hemmati *et al.* (2019)[9], in a research work entitled "*Social Value Added: A New Model for Developing Sustainability Accounting*", proposed to develop sustainability accounting by presenting a new model viz. social value added (SVA) that can address the challenges in sustainability accounting and can be a good alternative to sustainability accounting. To test the proposed social value added model, Nano engine oil was selected randomly and the test was performed using paired comparison of

data. The results showed that social value added (SVA) model can be appropriate for evaluating the economic, social and environmental performance of a business entity.

III. Objectives of the Study

III.1 General objective:

The study is attempted to analyse the impact of social value added on capital structure of the top five firms in the Telecommunication Industry in India.

III.2 Specific Objective:

1. To examine the relationship between social value added and capital structure of the top five firms in the Telecommunication Industry in India.
2. To analyse the impact of social value added on capital structure of the top five firms in the Telecommunication Industry in India.

IV. Hypothesis Developed for the Study

H_0^1: There is no significant relationship between social value added and capital structure.
H_0^2: There is no significant impact of social value added on capital structure.

V. Methodology of the Study

V.1 Sources of Data and Period of the Study

The study is based on the secondary data, which are collected from the annual reports of the sample firms of Telecommunication Industry in India, for a period of five years i. e. from 2015-16 to 2019-20.

V.2 Variables Used:

In the present study, the following variables are used viz. social value added as independent variable and capital structure as dependent variable.

V.3 Research Tools:

In the present study appropriate statistical tools viz. correlation and regression are used for analysis.

V.3.1 Correlation:

$$r = \frac{n(\sum xy) - (\sum x)(\sum y)}{\sqrt{[n\sum x^2 - (\sum x^2)]\ [n\sum y^2 - (\sum y^2)]}}$$

Where,

n= Number of items

∑=Sigma

x= Capital structure (debt-equity)

y = Social value added

V.3.2 Regression:

$$Y= a+ b_1(X_1) + b_2(X_2) + b_3(X_3) + b_4(X_4) + b_5(X_5) + u$$

a= Regression constant

b1, b2…= Regression co-efficients

Y =Capital structure

X_1= Wages

X_2= Interest

X_3= Dividend paid

X_4= Tax

X_5= Retained earnings

u= Error term

V.4 Sampling Technique

The study utilizes purposive sampling as the primary technique for selecting the sample. This approach was chosen to deliberately focus on the top five blue-chip companies within the telecommunications industry, ensuring that the sample includes firms that are not only industry leaders but also represent the most stable and influential entities in the industry. By targeting these specific companies, the study aims to gather insights that are highly relevant and reflective of the broader trends and impacts within the telecommunications industry.

V.4.1 Sample firms for the study

Table 1

List of Blue chip firms in Telecommunication Industry in India

Sl. No.	Name of the Firm	Sl. No.	Name of the Firm
1	Bharti Airtel	10	Reliance Communications
2	GTL Infrastructure	11	Route Mobile
3	GTPL Hathway	12	Sterlite Technologies
4	HFCL	13	Tata Communincations
5	Indus Tower	14	Tata Teleservices
6	ITI	15	Tejas Networks
7	Mahanagar Telephone Nigam	16	Vindhya Telelinks
8	On Mobile global	17	Vodafone Idea
9	Railtel Corporation India		

Source: https://www.valueresearchonline.com/stocks/selector/indices/99/bse-telecom-index/?500error=2

Table 2
V.4.2 Sample Firms for the Study

Sl. No.	Name of the Firm
1	Bharti Airtel
2	Vodafone Idea
3	Tata Teleservices
4	Mahanagar Telephone Nigam
5	Reliance Communications

Source:https://www.moneycontrol.com/stocks/marketinfo/marketcap/bse/telecommunications-service.html

VI. Analysis and Interpretation

Table 3
VI.1 Descriptive Statistics of Debt-Equity and Social Value Added

Variables	N	Minimum	Maximum	Mean	Standard Deviation	Co-efficient of Variation
Debt-equity	5	0.002	0.768	0.321	0.291	90.65%
Wage	5	0.019	0.897	0.368	0.275	74.72%
Interest	5	0.010	0.105	0.061	0.031	50.81%
Dividend paid	5	0.159	0.201	0.174	0.018	10.34%
Tax	5	0.060	0.105	0.072	0.019	25.95%
Retained earnings	5	0.098	0.328	0.200	0.095	47.66%

Source: *Computed from the data collected from the annual reports of the Companies*

Table 3 shows the descriptive statistics of the variables selected for the study. The mean of 'debt-equity' is 0.321 with the standard deviation 0.291 and the minimum value of 'debt-equity' is 0.002. The mean of 'wages' is 0.368 with standard deviation of 0.275. The minimum and maximum value of 'wages' are 0.019 and 0.897 respectively. The mean of 'interest' is 0.061 with the standard deviation of 0.031, the maximum value of 'interest' is 0.105 and the minimum is 0.010. The mean of 'dividend paid' is 0.174 with the standard deviation of 0.018; the maximum of 'dividend paid' is 0.201 and the minimum is 0.159.

The mean of 'tax' is 0.072 with a standard deviation of 0.019, and the maximum of 'tax' 0.105 and minimum is 0.060. The mean of 'retained earnings' is 0.20 with a standard deviation of 0.095, and the minimum and maximum values range from 0.098 to 0.328.

Table 4
VI.2 Correlation of Capital Structure and Tangible Variables of SVA

Variables	Debt-Equity	Wages	Interest	Dividend paid	Tax	Retained earnings
Debt-Equity	1					
Wages	-0.625 (0.260)	1				
Interest	0.624 (0.260)	0.981** (0.003)	1			
Dividend paid	-0.749 (0.146)	0.442 (0.456)	-0.477 (0.417)	1		
Tax	0.258 (0.675)	0.952* (0.013)	-0.907* (0.033)	-0.345 (0.573)	1	
Retained Earnings	0.982** (0.003)	-0.072 (0.909)	-0.016 (0.980)	-0.732 (0.154)	0.240 (0.694)	1

Source: Computed from the data collected from the annual reports of the Companies

Figures in the parentheses are p values.

**Correlation is significant at the 0.01 level (2-tailed).

*Correlation is significant at the 0.05 level (2-tailed).

Table 4 shows the correlation matrix of capital structure and the tangible value added variables of top five firms in the Telecommunication Industry in India for the period from 2015-16 to 2020-21. It indicates that 'retained earnings' is significantly positively correlated with capital structure (debt-equity) with correlation value 0.982 at 1% level of significance. Whereas, the other variables viz. 'wages', 'interest', 'dividend paid' and 'tax' don't have significant correlation with 'capital structure'. Hence "*H_0^1:There is no significant relationship between social value added and capital structure"* is rejected for 'retained earnings'(tangible variable of SVA) only.

Table 5
VI.3 Regression Analysis - Impact of Social Value Added on Capital Structure

Variables	Coefficients	Std. Error	t value	p value
(Constant)	0.535	0.082	-3.011	0.001
Wage	-1.433	9.667	-0.128	0.973
Interest	0.446	0.929	1.689	0.017**
Dividend Paid	-0.126	0.691	2.588	0.671
Tax	0.005	0.374	0.551	0.014**
Retained Earnings	0.305	0.861	-1.384	0.012**
R	0.959			
R^2	0.920			
Adjusted R^2	0.880			

F Stat	0.042**

Source: Computed from the data collected from the annual reports of the Companies
**. Significant at 5% level

The result of regression has been summarized in table 5. It can be found from the table that 'interest', 'tax' and 'retained earnings' are significantly positive at 5% level of significance, while the other variables viz. 'wage' and 'divided paid' are insignificant.

The adjusted R^2 (88%) indicates the impact of SVA on 'Capital Structure' explained by 'wage', 'interest', 'dividend paid', 'tax' and 'retained earnings'. The F statistics (0.042) shows a significant positive impact at 5% level i. e. the overall impact of selected tangible value added variables is significant positively. Hence "*H_0^2:There is no significant impact of social value added on capital structure"* is rejected only for 'wage' and 'dividend paid' (tangible variables of SVA).

VII. Summary of Findings and Conclusion

The study analysed the impact of social value added on capital structure for a period of five years from 2015-16 to 2019-20. The sample units drawn are based on the top five firms listed on BSE. The study used descriptive statistics, correlation and regression for analysis.
The study reveals that there is a significant impact of social value added on capital structure.

VIII. Limitations of the Study

1. The study considered only the tangible variables of the social value addedmodel. All the Intangible value added Variables are kept outside the purview of the study.
2. The study covers only a period of five yearsi. e. from 2015-16 to 2019-20 and is limited only to the top five telecommunication firms listed on BSE.

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