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An Empirical Study on Effect of Capital Structure on Financial Performance of Paper Manufacturing Companies in India: Penal Data Analysis

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Abstract

In this research paper, the researcher has attempted to study the effect of capital structure on the financial performance of selected paper manufacturing firms in India. Secondary data have been used. The study period was of five years from 20014-2015 to 2018-2019. Accounting ratio and statistical tools like descriptive statistics, correlation matrix, and penal data analysis have been used. The result of the descriptive statistics shows that ROA, ROCE, EPS and valuation indicate good financial performance. While the debt-equity ratio shows debt is more than equity in the capital structure. The researcher identified four financial indicators, namely ROA, ROCE, EPS and Valuation. The researcher has also identified debt-equity ratio, long term debt-equity ratio, a log of debt, firm size and interest coverage ratio as dependent variables. Model-1 indicates that ROS is significantly affected by the interest coverage ratio, wherein fixed-effect model ROA is also affected by the interest coverage ratio. Model-2 shows that there is a significant effect of debt-equity ratio long term debt-equity ratio and interest coverage ratio on RCOE. The fixed-effect model shows that only firm size and interest coverage have a significant effect on ROCE. Model-3 shows that the debt-equity ratio, long term debt-equity ratio, firm size, a log of debt and interest coverage ratio is insignificant to EPS. Wherein firm size is significant to EPS in fixed effect mode. Another variable like the debt-equity ratio, long term debt-equity ratio, a log of debt and interest coverage ratio is insignificant to EPS. Model-4 indicates that firm size is significant to the valuation. The fixed-effect model shows that all independent variables are insignificant to valuation.

Keywords: Capital Structure, Financial Performance and Cement Companies

Introduction

Financial decisions are very important because it has an impact on the financial performance of the firm. A financial decision like designing capital structure is also very significant because it affects financial performance. There are some approaches of capital structure decision. David Durand has given a theory of capital structure. He has given two models (1) net income approach and (2) net operating income approach. These two approaches are useful while taking the capital structure decision. He explained that each capital structure decision is relevant to the value of the firm. Net income approach says that the use of debt in capital structure reduces the cost of capital and increases the value of the firm. It means that a change in the financial leverage will lead to a corresponding change in the overall cost of capital as well as the total value of the firm. Here it is believed that debt is the cheaper source of finance because of tax exemption on the interest of debt. Another approach of capital structure explained by Durand is "net operating income approach which believes that capital structure decision is irrelevant to value of firm". NOI approach justifies that use of a high amount of debt in capital structure decrease the cost of capital but increases the technical risk. When technical risk increases, shareholders' expectations for higher return are also increased, therefore the use of debt in capital structure decreases the cost of capital, but a high expectation of shareholders increases the cost of equity which neutralises the effect of cost of capital and thereby the value of the firm. The other approach proposed by Modigliani Miller, which is known as Modigliani miller's model in the capital structure. This approach believes that capital structure decision is irrelevant to the value of the firm. This approach is based on three concepts (1) arbitrage process (2) homemade leverage and (3) all

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firms have identical risk whereas the traditional approach says that the use of debt in the capital structure up to some extent is beneficial, but it affects adversely if the debt in capital structure is used beyond a certain limit. A very high amount of debt in capital structure increases the risk of the firm. Increased risk changes the cost of equity capital, which leads to a decline in the overall cost of capital. Here researcher has based the theory of capital structure explained by David Durand. Capital structure is explained by debt-equity ratio, while financial performance is explained by return on assets, return on capital employed, earning per share and valuation. The researcher has selected a paper six paper manufacturing firm from the total firm of 39 firms listed on the stock exchange. Moreover, the Indian paper industry accounts for 16% of the total production of the world. The estimated turnover is Rs. 25000 crores. Growth in demand for paper is approximately 15%. The Indian paper industry has top 15 global players with the production of more than 6 million tones, and annual turnover is estimates of Rs. 150,000 million. The industry provides employment to more than 0.12 million people directly and 0.34 million people indirectly. Paper industry is 15th largest in the world. Government has given the paper industry as of 35th high priority lists. There are problems also stipulated to the paper industry. Indian paper industry needs huge capital in latest technology because manufacturing is being through hold machine at lower speed; most of the plants are inefficient and also consume more power. Besides, Digital technologies and rapidly falling demand are pushing paper companies to the shrink. Therefore looking for importance and problems being faced by the industry, Researcher has selected the paper industry.

Review of Literature

Alwshah, K. A. (2009) made a study on the impact of corporate governance and ownership structure on performance and financial decisions of firms: evidence from Jordan. In this thesis, he studied whether ownership structure impacts financial decisions and performance among all listed firms in Amman Stock Exchange for the year 2004-2006. In his research to analyze this impact, he used cross-sectional average methodology. In this doctoral thesis, he concluded that leverage was positively related and did not have a significant effect on the firm`s performance. Abor (2005) study made on the effect of capital structure on profitability: An empirical analysis of listed firms in Ghana. In his researcher selected 50 companies listed on the Ghana Stock Exchange (GSE) for five years (1998-2002). Multiple regression analysis is used to estimate the model which connects the return on equity (ROE) variable with the capital structure. The result showed a positive relationship between short term debt to total assets ratio and ROE. Meanwhile, negative relationship occurs between long term debt to total assets ratio and ROE. Lavorskyi, M. (2013) made a study on the impact of capital structure on firm performance: evidence from Ukraine. In his research reviewed the relationship between capital structure and firm performance with a sample of 16.5 thousand Ukrainian firms for ten years. The study was done using a model developed by Shaffer for a fixed-effects panel data model. In this research concluded that leverage was negatively affecting firm performance. A study made by Panicker, D. S. (2013) on Capital structure determinants for sustained performance in the energy sector of India. In this research, he has selected eight listed companies on BSE for 5 years. The analysis was done using linear regression. In this study, he founded that the leverage has less impact on the firm`s performance as most of their debt funding is through tangible assets. This paper brings in the industry perspective stating that the impact of leverage on performance might vary with industry. Vitor and Badu (2012) examined the effect of capital structure on the performance of listed banks in Ghana from 2000 to 2010. The data is collected from the Ghana Stock Exchange and annual reports of each bank. The method used is panel data regression. The result shows that the public banks in Ghana have very high debt ratios, and the debt level has a negative influence on bank performance. The research shows a high level of debt on each public bank. It can be seen from the banks that depend on short-term debt, and it leads to low bond market activity. The regression results indicated that capital structure has a negative effect to firm performance measured by ROE and firm value (Tobin's Q). Chisti, K. A., Ali, K., & Sangmi, M. I. D. (2013) made a study on the Impact of capital structure on profitability of listed companies (evidence from India). In this research, they selected BSE listed firms in the Indian automobile industry and they selected a sample of 10 companies and for study period five years. In their research, they did Correlation analysis between variables and profitability to ascertain impact. In this paper, they concluded that debt was negatively correlated to profitability, which implies that an increase in debt would affect the profitability of the firm. Goyal (2013) made a study on the effect of capital structure on the profitability of listed banks in India from 2008 to 2012. The multiple regression analysis is used to determine the relationship between the dependent variable (short term debt to total capital, long term debt to

total capital, total debt to total capital) on the independent variable (ROA, ROE and earning per shares). The control variables used are firm size (SIZE) and firm asset growth (AG). Results show there was a positive relationship between short-term debt with profitability measured by ROA, ROE and earnings per shares (EPS). Chadha, S., & Sharma, A. K. (2015) the study made on the Capital structure and firm performance: Empirical evidence from India. In their study, they did explain the impact of financial leverage on firm performance with a sample of 422 BSE listed manufacturing companies for 10 years. To analyses the leverage effect, annual financial standalone data was considered. Empirical study has done by selected financial ratio analysis and panel data approach. In this study, they concluded that financial leverage was not impacting the firm`s financial performance. Thomas, A. E. (2013) made a study on Capital Structure and Financial Performance of Indian Cement Industry. In his study investigating the impact of leverage on firm`s profitability in the Indian cement industry. For this research, he was selected 21 Indian companies of the Cement industry for five years, where the Compound average growth rate is of 8.37%. In this paper, he Collected data from secondary sources and converted into relative measures such as percentages, ratios for analyzing the impact of leverage on profitability. In this paper, he concluded on the basis of finding that due to higher profitability and growth rate, the major source of finance for cement companies were internally generated funds. Mehta, P. V. (2013) researched Relationship between and capital structure financial performance: evidence from the Indian stock market. In this paper, he examined the relationship between capital structure and financial performance of 200 National Stock Exchange (NSE) listed companies for five years. In this research paper, different financial variables and financial ratios were collected and it was measured by using the Pearson correlation coefficient. In this paper, he concluded that companies will have less profitability if the leverage was high. An empirical study made by Banerjee, A., & De, A. (2014) on Determinants of corporate financial performance relating to capital structure decisions in Indian iron and steel industry. In their paper, they observed the relationship between corporate financial performance relating to capital structure decisions for the pre-recession period (4 years) and post-recession period (4 years). In this paper for analysis of Determinants of corporate financial performance relating to capital structure decisions, they were worked on various variables to understand its impact using multiple regression model. In this study, they were concluded that financial leverage, size of the firm, debt service ratio will have a significant effect on the profitability of the firms. A study made by Olokoyo, F. O. (2013) on the Capital structure and corporate performance of Nigerian quoted firms: Apanel data approach. In this paper, he tested how to leverage impacts the firm`s performance with a sample of 101 listed firms in Nigeria for the period of 2003 to 2007. Panel data model with fixed-effect, random-effect and a pooled regression model was used. In his research, he concluded that leverage will have a negative impact on a firm`s performance. Osaretin Kayode Omoregie, Sodik Adejonwo Olofin and Fredrick Ikpesu (2019) worked on the trade-off between capital structure, profitability and liquidity for the period of 2005 to 2017. The researchers used penal VAR analysis. The result of the analysis says that capital structure does not affect profitability and liquidity. However, there is a negative effect of debt-equity ratio Manoj Kumar N.V. (2018) worked on the effect of capital structure on the financial performance of ITC limited from 2013 to 2017. The result of the study shows that there is a significant effect found of capital structure on financial performance. Gladys Micere Wamiori, Gregory S. Namusonge and Maurice M. Sakwa (2016) worked on the effect of capital structure on the financial performance of Kenyan manufacturing firms. The study is based on Survey, which resulted that capital structure has a positive effect on Financial performance of the firms.

Objective of the Study

The objectives of the study are as follows:

- To study the relationship between capital structure and financial performance of selected paper manufacturing companies in India.
- To examine the effect of capital structure on financial performance of selected paper manufacturing companies in India.

Methodology of the Study

Title of the research paper "An Empirical Study on Effect of Capital Structure on Financial Performance of Paper Manufacturing Companies in India: Penal Data Analysis" has been made by using secondary data extracted from financial statements of respective companies and money control.com. Secondary has been used. The period was from 20014-2015 to 2018-2019. Five years periods have been selected because it is justifiable from the point of

view of Descriptive statistics and moreover past five years data are demanded by the banks while sanctioning long term loans. Cause and effect relationship has been measured between dependent variables and independents variables. The sample size was of six paper manufacturing firms namely 1) JK paper, 2) International paper APPM, 3) Tamilnadu Newsprint and papers, 4) Seshasayee Paper and Boards, 5) Satia Industries and 6) Emami Paper Mills.

Data Analysis: Data analysis has been done through different accounting ratio calculated by formula. Research has used statistical tools like descriptive statistics; correlation matrix, Pooled Ordinary Least Square Model, Hausman Test, Random effect model and fixed-effect model. The researcher has selected five independent variables, which are impacting on the financial performance of selected firms from the review of the literature.

1. $ROA = \beta 0 + \beta_1 (DER) + \beta_2 (LTDER) + \beta_3 (Firm\ size) + \beta_4 (debt) + \beta_5 (IC) + \mu it$
2. $ROCE = \beta 0 + \beta_1 (DER) + \beta_2 (LTDER) + \beta_3 (Firm\ size) + \beta_4 (debt) + \beta_5 (IC) + \mu it$
3. $EPS = \beta 0 + \beta_1 (DER) + \beta_2 (LTDER) + \beta_3 (Firm\ size) + \beta_4 (debt) + \beta_5 (IC) + \mu it$
4. $Valuation = \beta 0 + \beta_1 (DER) + \beta_2 (LTDER) + \beta_3 (Firm\ size) + \beta_4 (debt) + \beta_5 (IC) + \mu it$

Dependent Variables	*Description*
ROA	Return on assets
ROCE	Return on capital employed
EPS	Earning per share
Valu	Valuation of firm
Independents Variables	*Description*
TDR	Total debt ratio
LTDR	Long term debt ratio
Debt	Long of debt
Firm size	Total assets
IC	Interest coverage ratio

Data Analysis

Table 1: Descriptive Statistics

Particulars	*ROA*	*ROCE*	*EPS*	*Value*	*DER*	*LTDER*	*Firm Size*	*Debt*	*IC*
Mean	5.09	10.69	29.39	3.06	1.48	1.07	3.06	2.67	4.86
Median	3.05	7.19	13.70	3.20	1.02	0.71	3.02	2.77	2.23
Maximum	16.86	35.26	150.63	3.66	5.67	3.96	3.61	3.39	38.09
Minimum	-0.76	-0.51	-6.09	0.00	0.02	0.02	2.41	1.10	0.75
Std. Dev.	4.81	9.36	37.18	0.68	1.52	1.07	0.35	0.57	7.52
Skewness	0.86	0.97	1.70	-3.18	1.78	1.59	-0.16	-0.68	3.34
Kurtosis	2.57	3.00	5.33	14.83	5.33	4.72	1.93	2.91	14.37
Jarque-Bera	3.92	4.69	21.33	225.42	22.52	16.36	1.56	2.30	217.36
Probability	0.14	0.10	0.00	0.00	0.00	0.00	0.46	0.32	0.00
Sum	152.58	320.68	881.62	91.67	44.43	32.19	91.86	80.01	145.75
Sum Sq. Dev.	671.13	2542.66	40078.39	13.37	67.02	33.49	3.65	9.53	1640.24
Observations	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

Table 1 shows descriptive statistics of selected variables for capital structure and financial performance. Mean of ROA is 5.09% and standard deviation of ROA is 4.81%, which shows that ROA highly fluctuates during the study period. The minimum ROA is negative, which also shows poor performance. ROCE is ranged between 35.26% to minus 0.51% which indicates a very bad trend of profitability during the study period. However, average ROCE is 10.69 which is good. EPS is also one of the indicators of profitability, which ranged between Rs. 150.63 to Rs. (-6.09) showing highly fluctuated trend. High fluctuation is also reflected in the standard deviation. Firm valuation is also significant to value the firm. The firm valuation is minimum zero and maximum 3.66 with an average of 3.06. Firm valuation also shows that the value of the firm highly fluctuates. Capital structure is represented by debt-equity ratio. Mean of the debt-equity ratio is 1.48, and the range of the ratio is 5.67 to 0.02. The mean ratio shows that the amount of debt is more than equity. Mean of firm size and log of debt is 3.06 and

2.67. Mean of interest coverage ratio is 4.86. The standard deviation of all three variables like firm size, debt and interest coverage ratio is 0.35, 0.57 and 7.52 which shows that the trend firm size and debt are less fluctuated and trend of interest coverage ratio highly fluctuates during the study period.

Table 2: Correlations Matrix

	ROA	ROCE	EPS	Valuation	DER	LTDER	Firm Size	Debt	IC
ROA	1								
ROCE	.889**	1							
EPS	.812**	.684**	1						
VALUATION	-.030	.060	-.072	1					
DER	-.532**	-.300	-.461*	.075	1				
LTDER	-.555**	-.337	-.481**	.127	.989**	1			
FIRM SIZE	-.310	-.170	-.309	.743**	.213	.298	1		
DEBT	-.689**	-.536**	-.607**	.450*	.499**	.557**	.771**	1	
IC	.759**	.710**	.578**	.051	-.385*	-.390*	-.164	-.716**	1

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

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

Table 2 shows the correlation matrix of selected dependents and independent variables. The correlation between ROA and ROCE, EPS and IC is positive and significant at 1% level of significance, while the correlation between ROA and DER, LTDER and DEBT is negative and significant at 1% level of significance. Correlation between ROCE and EPS and IC is positive and significant at 1% level of significance, whereas the correlation between EPS and DER, LTDER and DEBT is negative and significant. Correlation between valuation and debt and firm size is positive and significant. DER has a significant and positive correlation with LTDER and DEBT, while negative and significant relation with IC. Correlation between LTDER and DEBT and IC is significant. Correlation between firm size and debt is significant. And last debt has a significant correlation with CI. In short, DER and LTDER have a significant correlation with ROA and EPS. DEBT has a significant correlation with ROA, ROCE, EPS and Valuation. While IC has a significant correlation with ROA, ROCE, EPS and Valuation.

Hausman test is used to test between the fixed effect model and random effect model. The result of the test significant which indicates that the fixed effect model is appropriate.

Table 3: Model-1 ROA as Dependent Variable

Pooled Ordinary Least Square Method (Model-1)				Fixed Effect Method			
Variable	Coefficient	t-Statistic	Prob.	Variable	Coefficient	t-Statistic	Prob.
ROA	9.42	1.45	0.16	ROA	-54.84	-2.19	0.04
DER	1.23	0.39	0.70	DER	0.99	0.32	0.75
LTDER	-3.25	-0.71	0.48	LTDER	-4.23	-0.89	0.38
FIRM_SIZE	-4.60	-0.74	0.47	FIRM_SIZE	10.52	1.39	0.18
Log of DEBT	3.29	0.58	0.57	Log of DEBT	10.07	1.31	0.20
Interest coverage ratio	0.54	2.15	0.04*	Interest coverage ratio	0.80	2.70	0.01*
R-squared	0.68			R-squared	0.84		
Adjusted R-squared	0.61			Adjusted R-squared	0.75		
S.E. of regression	3.01			S.E. of regression	2.41		
Sum squared resid	217.53			Sum squared resid	110.04		
Log likelihood	-72.28			Log likelihood	-62.06		
F-statistic	10.01			F-statistic	9.69		
Prob(F-statistic)	0.00			Prob(F-statistic)	0.00		

Table 3 shows that result of regression. ROA is significantly affected by interest coverage ratio, whereas all other selected independent variables like debt-equity ratio, long term debt-equity ratio, firm size and log of debt are insignificant to ROA. F-test is significant, which shows that the model is fit. Adjusted R square shows 61% combine effect on a dependent variable like return on assets. The result of the fixed-effect model indicates that out of the total independent variables, interest coverage is significantly affected by ROA, where other variables are insignificant to ROA. The combined effect of all independent variables is 75% explained by the adjusted R square.

Table 4: ROCE as Dependent Variable

Pooled Ordinary Least Square Method (Model-2)				*Fixed Effect Method*			
Variable	*Coefficient*	*t-Statistic*	*Prob.*	*Variable*	*Coefficient*	*t-Statistic*	*Prob.*
ROCE	-1.69	-0.12	0.91	ROCE	-162.31	-3.41	0.00
DER	13.36	1.93	0.07**	DER	8.43	1.42	0.17
LTDER	-20.36	-2.03	0.05**	LTDER	-15.11	-1.68	0.11
FIRM_SIZE	-4.31	-0.31	0.76	FIRM_SIZE	46.44	3.23	0.00*
Log of DEBT	8.18	0.65	0.52	Log of DEBT	10.59	0.73	0.48
Interest coverage ratio	1.20	2.15	0.04*	Interest coverage ratio	1.30	2.30	0.03*
R-squared	0.58			R-squared	0.84		
Adjusted R-squared	0.50			Adjusted R-squared	0.76		
S.E. of regression	6.65			S.E. of regression	4.58		
Sum squared resid	1060.50			Sum squared resid	397.88		
Log likelihood	-96.05			Log likelihood	-81.34		
F-statistic	6.71			F-statistic	10.24		
Prob(F-statistic)	0.00			Prob(F-statistic)	0.00		

Table 4 shows ROCE as a financial indicator and debt-equity ratio as representative of capital structure. The effect of debt-equity ratio, long term debt-equity is found significant at 10% where the effect of interest coverage ratio is found significant at 5%. Debt-equity ratios, long term debt-equity ratio, firm size, the log of debt have an insignificant effect on ROCE. However, long term debt-equity ratio and firm size impacted negatively on ROCE. Combine effect of all independent variables is 50% explained by the adjusted R square. Result of the Hausman test is significant, which says that the fixed effect model is fit. The fixed-effect model explains that the interest coverage ratio and firm size are significantly affected by ROCE. Debt-equity ratios, firm size, the log of debt have a positive but insignificant effect on ROCE. Long term debt-equity ratio has a negative effect on ROCE. The combined effect of all independent variables is 76%, as explained by the adjusted R square. In both model F-test is significant which shows that the model is fit.

Table 5: EPS as Dependent Variable

Pooled Ordinary Least Square Method (Model-3)				*Fixed Effect Method*			
Variable	*Coefficient*	*t-Statistic*	*Prob.*	*Variable*	*Coefficient*	*t-Statistic*	*Prob.*
EPS	61.63	0.94	0.36	EPS	-598.93	-2.79	0.01
DER	2.61	0.08	0.94	DER	-37.67	-1.41	0.17
LTDER	-9.40	-0.20	0.84	LTDER	45.75	1.13	0.27
FIRM_SIZE	25.65	0.41	0.69	FIRM_SIZE	147.96	2.28	0.03*
Log of DEBT	-40.19	-0.70	0.49	Log of DEBT	60.38	0.92	0.37
Interest coverage ratio	0.54	0.21	0.83	Interest coverage ratio	4.31	1.70	0.11
R-squared	0.45			R-squared	0.80		
Adjusted R-squared	0.33			Adjusted R-squared	0.69		
S.E. of regression	30.43			S.E. of regression	20.61		
Sum squared resid	22224.72			Sum squared resid	8072.21		
Log likelihood	-141.68			Log-likelihood	-126.49		
F-statistic	3.86			F-statistic	7.53		
Prob(F-statistic)	0.01			Prob(F-statistic)	0.00		

Table 5 shows the result of regression. The pooled ordinary least square model explains that debt-equity ratio, firm size, and interest coverage ratio have a positive but insignificant effect on EPS. The variables like long term debt-equity ratio and log of debt have a negative and insignificant effect on EPS. The combined effect is 33% on EPS explained by adjusted R square. Hausman test is significant, which shows that the fixed effect model is significant. The effect model explains that firm size affects significant effect on EPS, whereas debt-equity ratio has a negative effect on EPS, but the effect is found insignificant. Long term debt-equity ratio, the log of debt and interest coverage ratio have a positive but insignificant effect. The combined effect is 69%, as explained by the adjusted R square. The F-test is significant in both models which show that models are fit.

Table 6: Valuation as Dependent Variable

Pooled Ordinary Least Square Method (Model-4)				*Random Effect Method*			
Variable	*Coefficient*	*t-Statistic*	*Prob.*	*Variable*	*Coefficient*	*t-Statistic*	*Prob.*
Valuation	-2.27	-2.25	0.03	Valuation	-10.02	-2.21	0.04
DER	0.45	0.92	0.36	DER	0.11	0.19	0.85
LTDER	-0.63	-0.89	0.38	LTDER	-0.43	-0.51	0.62
FIRM_SIZE	2.22	2.29	0.03*	FIRM_SIZE	2.27	1.66	0.11
Log of DEBT	-0.53	-0.60	0.55	Log of DEBT	2.25	1.63	0.12
Interest coverage ratio	-0.01	-0.19	0.85	Interest coverage ratio	0.09	1.60	0.13
R-squared	0.60			R-squared	0.73		
Adjusted R-squared	0.52			Adjusted R-squared	0.59		
S.E. of regression	0.47			S.E. of regression	0.43		
Sum squared resid	5.29			Sum squared resid	3.59		
Log likelihood	-16.54			Log likelihood	-10.71		
F-statistic	7.33			F-statistic	5.18		
Prob(F-statistic)	0.00			Prob(F-statistic)	0.00		

Table 6 shows the regression result. The pooled ordinary least square method is used which indicates that firm size has a significant effect on v valuation, while long term debt-equity ratio, the log of debt and interest coverage ratio has an insignificant and negative effect on valuation. The combined effect is 525, as explained by the adjusted R square. The result of the Hausman test is insignificant, which explained that the random effect model is appropriate. The result of the random effect model shows that debt-equity ratio firm sizes, the log of debt and interest coverage ratio have a positive and insignificant effect on valuation whereas long term debt-equity ratio has a negative and insignificant effect on valuation. The combined effect of all independent variables is 59%. The F-test is significant, which shows that the model is fit.

Conclusion

From the above analysis of data, it is concluded that mean of ROA is 5.09, ROCE (10.69), EPS (29.39), valuation (3.06) and debt-equity ratio (1.48). The standard devotion of EPS shows high fluctuation. Maximum ROCE, ROA and EPS are 16.86% 35.26% and 150.63 respectively. The result of the descriptive statistic shows that there is a highly fluctuating trend seen during the study period. The fir size is ranged between 3.61 and 2.41, while log of debt is ranged between 3.39 and 1.10. The range between interest coverage ratio is 39.09 and 0.75 which shows high fluctuating trend during the study period. The result of correlation matrix shows that DER and LTDER have a significant correlation with ROA and EPS. DEBT has a significant correlation with ROA, ROCE, EPS and Valuation. While IC has a significant correlation with ROA, ROCE, EPS and Valuation Researcher has used penal data analysis and calculated pooled effect model, fixed effect model and random effect model through EViews 11sofware. The researcher identified four financial indicators, namely ROA, ROCE, EPS and Valuation. The researcher has also identified debt-equity ratio, long term debt-equity ratio, the log of debt, firm size and interest coverage ratio as dependent variables. Model-1 indicates that ROS is significantly affected by interest coverage ratio, wherein fixed effect model ROA is also affected by the interest coverage ratio. Model-2 shows that there is

a significant effect of debt-equity ratio long term debt-equity ratio and interest coverage ratio on RCOE. The fixed effect model shows that only firm size and interest coverage have a significant effect on ROCE. Model-3 shows that the debt-equity ratio, long term debt-equity ratio, firm size, the log of debt and interest coverage ratio is insignificant to EPS. Wherein firm size is significant to EPS in fixed effect mode. Another variable like the debt-equity ratio, long term debt-equity ratio, the log of debt and interest coverage ratio is insignificant to EPS. Model-4 indicates that firm size is significant to the valuation. The fixed-effect model shows that all independent variables are insignificant to valuation.

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