Company's Financial Health with special reference to Loan capital, total Capital Stock, fixed Capital and Sales Revenue

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Abstract

This paper evaluates the financial health of 14 Indian electronic goods companies with reference to loan capital, fixed Capital, total capital stock and Sales Revenue. The data covers the periods from 1991 to 2020 which has been taken from Prowess IQ CMIE New Delhi. The main objective of the study is investigated to the performance or financial health of the sample companies. Ratios of debt to total capital stock, debt to fixed capital and debt to sales revenue are treated as the main indicator of company's performance. The paper uses ratios and multiple regression methods for empirical evaluation. Results suggest that i) the function explain the minimum and maximum variation of debt to total capital ratio 11.9% to 78.8% for company 05 and 10 respectively and the functions shift upward at an annual rate of 4.634 to 50.806 for 07 and 11 respectively; ii) the function explains the variation of minimum and maximum 15.9% to 90.3% for the company 14 and 10 respectively and the functions shift upward at an annual rate of 0.711 to 2.160 for the company 10 and 04 respectively to the debt to fixed capital ratio; iii) the function explains the minimum and maximum of variation debt to sales revenue ratio 11.6% to 80.4% for the company 02 and 12 and the functions shift upward at an annual rate of 0.002 to 0.049 for 06 and 12 respectively. These inferences that these companies have to upgrade skills education of labour, or upgrade organizational structure and managerial techniques to match the requirement of new technology which prevents them from the realization of full benefits of new technology.

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Introduction

Amount of loan capital per unit of fixed capital treats fixed capital as based of the borrowed capital. Total capital stock, fixed capital and sales revenue are the base of loan capital and showing the repayment capacity of debt capital of any company. Therefore, these variables have been treated as main sources of health of companies in this study.

Yuga Raj Bhattarai (2016) examined the impact of capital structure on the performance of manufacturing companies listed in Nepal stock exchange. He used firm's performance as a dependent variable and leverage, Firm size, Tangibility and growth rate as independent variable in the multiple regression models. The equation shows that capital Structure has a significant negative relationship with the performance of Nepalese manufacturing companies however the authors has not tested multicollinearity and the satisfaction or violation of the assumption of homoscedastidasty. Presence of multicollinearity among independent variables may make the regression coefficient not significant or a positive coefficient may also turn negative. The results may also be due to the disproportionally high proportion of the loan capital in total capital stock of company due to which interest liability and loan repayment liability is found to be negative in this case. Raluca Georgiana (2014) the study has the purpose to examine the relationship that is established between capital structure and profitability of companies, 53 companies registered on the Bucharest stock exchange and he finds that the performance of the firms, if measured in terms of ratios of ROA (ration on assets), ROE (ratio on equity), RCA (net sales margin rate) and MBR (market to book ratio) to total capital, significantly depends on the capital structure. The ratios used in this paper are by and large similar to the ratios used in our paper. Salawu Rufiu Oyesola (2008) found that the capital structure depends on non – financial parameters, he used penal data of 33 Nigeria companies. He evolved fixed variables regression model based on penal data. This finding suggest that the relative weights of different components in capital structure pay an important role in final outcome of production and marketing operation of the companies rather than financial health and operational outcomes being determinant by loan capital. Shubita Mohammud Fauri (2012) analyzed the impact of capital structure on the Jordanian industrial companies. She took the sample of 39 companies and used multiple regression model. She found the significant correlation coefficient between debt and profitability. Suhendra Euphrasis Susy (2014) uses data of 17 Indonesian firms, period covered rages 2010-2012 thus period cover is only 3 year yet each variables comprises 51 observations. He uses multiple regression model which has profitability, firm size and assets growth which has capital structure as the dependent variable and profitability, firm size and assets growth are treated independent variable. The study has found that the independent variables exercise significant influence on the capital structure of the sampled companies. Interestingly, the direction of the causality is inverses to the direction used in other studies however; the study does not mention debt capital. Joze P. Damijan (2017) evaluates leverage of the corporates and range of debt of Slovenians firms during the financial crisis. He examines the effect of financial distress on the performance of the firms. The performance is related to productivity, employment, exports, and investment. Results shows that the micro and small firms are found to suffer relatively more than larger firms. Ijaz Hussain Bokhari at all (2019) this paper examines the impact of corporate governance, capital structure, and dividend policy on returns of assets. Whereas political instability have been introduced as moderating variable. The authors used 56 listed companies of textile sector of Pakistan and has been selected over the period of 2012-2016 and data collected from the audited annual reports. The result of study concludes that CG, CS, and DP have significant impact on ROA. The results also affirms that political instability moderate the relationship between CG, CS, DP and ROA. Sandra Jooste et all (2016) the main objective of this study is to examine empirically relationship between debt levels and total shareholder returns of platinum JES listed companies. The study field comprises annual analyses for 12 companies listed under the Platinum and Precious Metals sector on the JSE Ltd for the 14-year period 2000 to 2013. The result of the study shows that the level of debt and rate of returns to equity capital are significantly related. The finding of the study implies that the return to equity capital is an important indicator of the financial health of the companies which, in turn, enables to the companies to raise loan capital to the desired extent. Hong Zhang et all (2014) in this

paper has investigated the impact of the credit crunch on target capital structures and the sample consists of 1,128 listed companies in China during the period 2000–2011. Thus the base of the study is penal data. They used econometric model and tested the validity of the model by evaluating the significance of the multicollinearity. Which is the usual malady of multiple regression model. However the problem of autocorrelation in the errors and the problem of heteroscedasticity have not been evaluated which militates against the acceptance of the study. The main finding is that the result shows that the credit crunch was associated with a decrease in the target debt ratios for all listed companies.

Sources of data:

The basic source of data is PROWESS IQ, centre for monitoring Indian Economy New Delhi. The paper focuses on the data relating to 14 Indian companies of electronic industry. The number of electronic goods companies' data of which are reported is quite large. Therefore stratified random sample has been taken from the list. The stratification of the companies has been done according to the size of turnover and investment which is defined by 'Ministry of Micro, Small and Medium Enterprises'.

Methods and models

The paper uses ratios method to evaluate the calculated ratios of each company. Another method uses the multiple regression models for company wise for all three ratios which is given below;

$$Y_t = \dot{\alpha}_0 + X_t + U_t$$

- Y – dependent variable
- X- Independent variable and
- Small t refers to time.
- U refers to random error

Analysis of empirical results:

Empirical results have been divided into two parts. In the first part, Ratios of debt to total capital stock, debt to fixed capital and debt to sales revenue are treated as the indicator of company's performance. And in the second part, the paper apples regression on the ratios company wise.

Debt to total capital stock ratio

Table – 1

Company's name														
Year	01	02	03	04	05	06	07	08	09	10	11	12	13	14
1991	0.23	0.29	0.18	0.17	0.05	0	0.34	0.39	0.42	0.25	0.34	0.48	0.37	0.05
1992	0.11	0.27	0.24	0.19	0.32	0	0.40	0.40	0.35	0.31	0.32	0.51	0.26	0.02
1993	0.37	0.11	0.37	0.17	0.61	0	0.43	0.00	0.38	0.27	0.22	0.54	0.17	0.00
1994	0.15	0.08	0.28	0.10	0.80	0	0.37	0.39	0.30	0.33	0.31	0.50	0.37	0.08
1995	0.15	0.04	0.17	0.09	0.03	0.28	0.42	0.40	0.42	0.31	0.10	0.37	0.26	0.14
1996	0.10	0.06	0.13	0.04	0.27	0.49	0.32	0.60	0.35	0.32	0.22	0.38	0.17	0.10
1997	0.23	0.07	0.20	0.12	0.44	0.56	0.15	0.32	0.36	0.39	0.22	0.33	0.16	0.27
1998	0.39	0.05	0.13	0.18	0.53	0.89	0.36	0.16	0.43	0.36	0.53	0.30	0.15	0.28
1999	0.29	0.02	0.08	0.24	0.53	1.08	0.33	0.08	0.42	0.27	0.56	0.25	0.35	0.32
2000	0.25	0.05	0.06	0.19	0.49	1.10	0.32	0.39	0.45	0.22	0.50	0.06	0.37	0.05
2001	0.29	0.02	0.03	0.18	0.48	1.05	0.34	0.40	0.40	0.16	0.48	0.02	0.37	0.02

Year	01	02	03	04	05	06	07	08	09	10	11	12	13	14
2002	0.22	0.02	0.03	0.04	0.41	1.00	0.30	0.00	0.43	0.12	0.31	0.01	0.26	0.00
2003	0.02	0.01	0.01	0.04	0.52	1.00	0.27	0.44	0.41	0.10	0.32	0.02	0.17	0.08
2004	0.01	0.01	0.01	0.04	0.46	0.91	0.23	0.37	0.42	0.09	0.42	0.02	0.04	0.09
2005	0.00	0.00	0.00	0.08	0.50	0.10	0.37	0.36	0.37	0.10	0.44	0.01	0.00	0.19
2006	0.00	0.00	0.00	0.13	0.42	0.11	0.26	0.48	0.45	0.06	0.44	0.01	0.00	0.53
2007	0.00	0.00	0.00	0.11	0.56	0.04	0.29	0.48	0.42	0.05	0.40	0.02	0.01	0.39
2008	0.00	0.00	0.00	0.03	0.36	0.00	0.18	0.33	0.49	0.02	0.33	0.19	0.00	0.29
2009	0.00	0.00	0.00	0.02	0.44	0.00	0.04	0.39	0.51	0.04	0.26	0.20	0.00	0.41
2010	0.00	0.00	0.00	0.03	0.34	0.00	0.00	0.45	0.52	0.01	0.12	0.18	0.00	0.46
2011	0.02	0.00	0.00	0.16	0.35	0.00	0.14	0.38	0.52	0.02	0.04	0.14	0.00	0.28
2012	0.08	0.00	0.00	0.15	0.34	0.30	0.13	0.44	0.58	0.05	0.00	0.14	0.06	0.25
2013	0.13	0.04	0.00	0.15	0.31	0.34	0.13	0.46	0.63	0.05	0.00	0.15	0.08	0.19
2014	0.08	0.07	0.00	0.17	0.35	0.41	0.16	0.44	0.63	0.05	0.00	0.10	0.08	0.23
2015	0.01	0.04	0.00	0.12	0.34	0.54	0.20	0.37	0.63	0.01	0.00	0.11	0.06	0.26
2016	0.01	0.06	0.00	0.11	0.22	1.06	0.31	0.22	0.63	0.02	0.00	0.11	0.00	0.33
2017	0.00	0.07	0.00	0.05	0.20	0.61	0.82	0.06	0.57	0.01	0.00	0.10	0.00	0.38
2018	0.00	0.06	0.00	0.10	0.18	0.71	1.50	0.00	0.71	0.00	0.00	0.10	0.00	1.48
2019	0.01	0.00	0.00	0.11	0.19	0.72	2.86	NA	0.90	0.02	0.00	0.08	0.00	1.87
2020	0.02	0.00	0.00	0.16	0.18	NA	4.00	0.15	NA	0.01	0.00	0.09	NA	NA

Author's own calculations

Table 1 shows that the ratio of debt capital to total capital stock is less than one for 13 companies (company's name 01,02,03,04,05,07,08,09,10,11,12,13 and 14) during the all 30 years of study, only one company (06) has the value of ratio is more than one for 5 years(1991-2003). If value of the ratio is less than 1 it means loan capital is less than the total capital. It may be taken as an indicator of the fact that the company is relying more on its own resources for investment than loan capital. In our opinion this indicator indicates good financial health of the company and companies have repaying capacity of the loan.

Debt to fixed capital ratio

Table – 2

	Company's name													
Year	01	02	03	04	05	06	07	08	09	10	11	12	13	14
1991	0.45	0.27	0.52	0.63	0.23	3.20	0.43	1.36	0.56	0.57	0.34	0.10	1.31	0.80
1992	0.63	0.74	0.51	0.55	0.99	2.10	0.44	1.15	0.38	0.81	0.11	.009	1.40	0.19
1993	0.05	0.68	0.91	0.01	0.24	1.99	0.74	5.38	0.77	0.04	0.87	0.71	1.48	0.90
1994	0.53	0.91	0.16	0.16	0.90	8.69	0.01	0.53	0.34	0.90	0.26	0.45	1.93	0.18
1995	0.86	0.11	0.35	1.00	0.00	2.25	0.64	5.75	0.73	0.22	0.22	0.88	1.48	0.10
1996	0.50	0.90	0.51	0.35	0.04	2.88	0.50	2.00	0.86	0.06	0.30	0.61	11.71	0.12
1997	0.18	0.14	0.69	0.17	0.15	3.20	0.95	1.50	0.55	0.62	0.30	0.48	2.83	0.75
1998	0.45	0.67	0.34	0.45	0.63	2.10	0.22	3.60	0.34	0.04	0.43	0.47	3.16	0.99
1999	0.63	0.67	0.98	0.36	0.80	1.99	0.73	2.14	0.90	0.41	0.42	0.58	2.26	0.80
2000	0.24	0.63	0.48	0.32	0.07	1.81	0.17	1.36	0.15	0.35	0.31	0.17	2.91	0.19
2001	0.47	0.60	0.06	0.24	0.79	2.23	0.36	1.15	0.14	0.43	0.54	0.00	1.49	0.90
2002	0.71	0.67	0.70	0.03	0.23	3.07	0.22	5.38	0.39	0.58	0.75	0.82	1.58	0.18
2003	0.33	0.17	0.85	0.94	0.99	4.50	0.50	0.53	0.27	0.23	0.22	0.18	1.92	0.70
2004	0.57	0.87	0.77	0.01	0.24	1.24	0.43	5.75	0.35	0.03	0.47	0.93	1.73	0.17
2005	0.74	0.87	0.13	0.00	0.90	6.61	0.80	6.43	0.69	0.20	0.37	0.02	1.54	0.49
2006	0.87	0.18	0.59	0.09	0.12	8.37	0.99	2.61	0.75	0.46	0.56	0.18	1.24	0.51
2007	0.96	0.05	0.28	0.96	0.65	1.67	0.99	2.98	0.83	0.58	0.58	0.36	1.34	0.48
2008	0.41	0.19	0.95	0.11	0.62	1.52	0.48	2.45	0.01	0.58	0.31	0.74	1.02	0.74
2009	0.73	0.50	0.93	0.61	0.58	2.35	0.23	8.09	0.85	0.91	0.93	0.80	1.31	0.33
2010	0.96	0.68	0.70	0.94	0.60	1.02	0.10	9.13	0.85	0.05	0.27	.029	1.40	0.08
2011	0.47	0.67	0.53	0.96	0.55	9.89	0.52	1.84	0.85	0.23	0.23	0.23	1.48	0.52
2012	0.08	0.65	0.37	0.26	0.58	1.21	0.66	4.55	0.31	0.75	0.46	0.84	1.93	0.51
2013	0.52	0.65	0.61	0.56	0.82	1.10	0.54	5.09	0.17	0.89	0.02	0.50	1.48	0.48
2014	0.35	0.89	0.63	0.97	0.90	1.16	0.55	5.54	0.29	0.68	0.49	0.75	1.71	0.62
2015	0.97	0.83	0.84	0.17	0.09	2.50	0.08	6.68	0.29	0.50	0.52	0.21	1.30	0.39
2016	0.37	6.68	0.82	0.31	0.28	1.91	0.66	1.52	0.33	0.99	0.63	0.98	1.60	0.65
2017	0.80	0.32	0.11	0.82	0.99	1.44	0.43	1.48	0.77	0.16	0.17	0.46	1.17	0.66
2018	0.05	0.16	0.34	0.69	0.02	1.30	0.18	1.43	0.47	0.36	0.34	0.24	1.08	0.57
2019	0.42	0.50	0.71	0.57	0.93	1.43	0.05	0.95	0.16	0.69	0.79	0.93	1.05	0.38
2020	0.65	0.86	0.04	0.43	0.12	1.43	0.00	6.96	0.16	0.30	0.61	0.59	1.05	0.38

Author's own calculations

Table 2 shows that the ratio of debt capital to fixed capital is less than one for 11 companies (company's name 01,02,03,04,05,07,,09,10,11,12, and 14) during the all 30 years of the study, only three companies (06,08 and 13) have the value of ratio is more than one. Fixed capital is the only assets to pay off the loan, if value of the ratio is less than 1. It means loan capital is less than the fixed capital. It may be taken as an indicator of the fact that the company is relying more on its own resources for investment than loan capital. In our opinion this indicator indicates good financial health of the company and companies have repaying capacity.

Debt to sales revenue ratio

Table – 3

Year	Company's name													
	01	02	03	04	05	06	07	08	09	10	11	12	13	14
1991	1.24	1.00	0.60	1.18	0.86	0.87	1.08	1.33	0.06	1.26	1.85	2.46	1.82	0.70
1992	1.08	1.06	0.56	1.33	1.03	0.86	1.48	1.25	0.11	1.24	1.24	2.15	1.52	0.40
1993	0.88	1.01	0.49	1.18	1.46	0.61	1.23	1.41	0.93	1.15	0.96	2.00	0.86	0.61
1994	0.84	1.13	0.56	1.33	1.82	0.92	1.38	2.43	0.69	1.01	1.33	1.75	1.05	0.64
1995	1.20	1.04	0.63	1.71	0.00	0.74	1.44	0.14	0.65	0.94	1.02	1.57	1.10	0.03
1996	1.32	1.14	0.66	1.58	0.02	0.87	1.05	0.68	0.92	1.01	1.43	1.56	1.18	0.82
1997	1.40	1.28	0.70	1.52	0.10	0.86	1.77	1.25	0.86	1.21	1.43	1.39	0.96	0.87
1998	1.09	1.16	0.72	1.36	0.39	0.61	2.00	1.53	0.69	1.23	0.76	1.38	1.82	0.56
1999	1.24	0.99	0.68	1.38	0.86	0.59	1.87	1.33	0.74	1.41	0.74	1.48	1.52	0.70
2000	1.08	1.02	0.76	1.43	1.03	0.53	1.97	1.25	0.80	1.24	1.15	1.81	0.86	0.40
2001	1.37	0.98	0.72	1.60	1.46	0.66	1.83	1.41	0.77	1.00	1.21	1.22	1.05	0.61
2002	1.43	1.07	0.66	1.72	1.82	0.81	1.58	2.43	0.98	1.17	1.27	1.09	1.10	0.64
2003	1.29	1.02	0.75	1.88	0.89	0.97	1.52	0.14	0.61	1.39	1.22	0.98	1.18	0.80
2004	1.16	1.09	0.66	1.99	1.10	1.33	1.20	1.48	0.66	1.41	1.57	0.97	1.47	0.82
2005	1.03	1.40	0.70	1.99	1.55	1.29	1.13	1.90	0.64	1.35	1.20	1.08	1.94	1.08
2006	1.19	1.34	0.65	1.96	0.96	1.18	1.21	1.53	0.67	1.57	1.59	1.07	1.30	0.66
2007	1.68	1.42	0.57	1.90	1.03	1.48	1.41	1.58	0.69	1.54	1.72	1.02	1.21	1.05
2008	1.59	1.36	0.49	1.88	0.94	1.47	1.58	1.55	0.62	1.49	1.78	0.87	1.26	0.94
2009	1.61	1.31	0.46	1.75	0.77	1.35	1.99	1.32	0.52	1.36	2.08	0.86	1.38	0.86
2010	1.82	1.13	0.48	1.34	0.90	1.21	2.18	1.43	0.64	1.43	1.86	0.75	1.24	0.88
2011	1.62	1.10	0.36	1.10	0.84	1.17	1.81	1.54	0.64	1.34	2.12	0.77	1.29	0.50
2012	1.57	1.16	0.33	1.12	0.75	1.14	1.74	1.44	0.40	1.35	2.38	0.82	1.31	1.04
2013	1.21	0.93	0.38	1.12	0.72	0.86	1.32	1.66	0.51	1.36	2.23	0.81	1.30	1.08
2014	1.27	0.88	0.38	1.04	0.89	1.22	1.51	1.86	0.51	1.23	1.99	0.84	1.34	1.20
2015	1.26	0.89	0.40	1.15	0.87	1.31	2.29	1.90	0.51	1.20	1.95	0.76	1.19	1.10
2016	1.48	0.87	0.39	1.32	0.80	0.48	0.53	3.78	0.34	1.04	1.71	0.75	1.14	0.98
2017	1.24	1.08	0.47	1.47	0.59	0.57	1.11	6.52	0.32	0.94	1.53	0.72	0.78	0.42
2018	1.18	0.65	0.50	1.27	0.62	0.31	0.13	3.95	0.08	0.88	1.56	0.76	0.83	0.30
2019	1.10	0.70	0.53	1.41	0.74	0.28	0.04	16.51	0.03	0.94	1.47	0.71	0.87	0.13
2020	1.02	0.90	0.48	1.39	0.72	0.28	0.00	3.95	0.03	0.94	1.40	0.76	0.87	0.13

Author's own calculations

Above the table shows that the ratio of debt capital to sales revenue is less than one for only 2 companies (company's name 03and 09) during 30 the years of the study, In case of many companies' value of the ratio is more than one for many years, and almost other 12 companies have greater than one value of the ratio which is an indicator of the company of poor repaying capacity of loan. The companies did not have level of the repayment of the loan capital. As a consequence the value of ratio has again come down less than 1 and more than. Alternatively, it may be interpreted as the consequences of accelerator of leverage the ratio. Sales revenue is a most important source to pay off the loan, if value of the ratio is greater than 1. It means loan capital is greater than the sales revenue. It may be taken as an indicator of the fact that the company is relying on loan capital more than its own resources to meet their current operations. In our opinion this indicator indicates poor financial health of the companies.

Analysis of empirical results:

The estimates of OLS regressions of debt to total capital stock ratio of company wise

The OLS estimates equations are reported below

Table – 4

		intercept	Time	R square	F	F significance
Company 1	Coefficient	20.590	-48.167	0.451	23.043	0.000
	t statistic	12.789	-4.800			
Company 2	Coefficient	18.603	-64.649	0.266	10.151	0.004
	t statistic	10.901	-3.186			
Company 3	Coefficient	19.920	-69.063	0.631	47.789	0.000
	t statistic	16.852	-6.913			
Company 4	Coefficient	18.728	-27.907	0.036	1.044	0.316
	t statistic	5.285	-1.022			
Company 5	Coefficient	22.289	-18.152	0.119	3.778	0.062
	t statistic	5.842	-1.944			
Company 6	Coefficient	0.476	-0.022	0.000	0.002	0.962
	t statistic	2.505	-0.048			
Company 7	Coefficient	13.033	4.634	0.198	6.908	0.014
	t statistic	7.491	2.628			
Company 8	Coefficient	18.582	-9.734	0.033	0.957	0.336
	t statistic	5.252	-0.978			
Company 9	coefficient	-9.903	50.806	0.741	79.927	0.000
	t statistic	-3.344	8.940			
Company 10	coefficient	23.570	-60.223	0.788	104.276	0.000
	t statistic	21.598	-10.212			
Company 11	coefficient	22.399	-30.084	0.435	21.583	0.000
	t statistic	11.619	-4.646			
Company 12	coefficient	22.003	-35.344	0.447	22.598	0.000
	t statistic	12.018	-4.754			
Company 13	coefficient	21.608	-48.733	0.590	40.256	0.000
	t statistic	15.187	-6.345			
Company 14	coefficient	11.288	11.581	0.418	20.137	0.000
	t statistic	7.231	4.487			

Source: author's own calculation (Excel & SPSS) *significance level 0.05, **table value of t 1.706

The table 4 shows that

1. The regression function of debt to total capital ratio of the companies 04, 06 and 08 does not fit the data well;
2. The coefficients of correlations and coefficients of time are not statistically significant for company 04, 06 and 08.
3. The regression function of debt to total capital ratio of the companies 01,02,03,05, 07,09,10,11,12,13 and 14 fit the data well;
4. The function explains the variation minimum and maximum 11.9% to 78.8% for 05 and 10 respectively.
5. The positive coefficients of time are statistically significant for company 07, 09 14.
6. The functions shift upward at an annual rate of 4.634 to 50.806 for 07 and 11 respectively.
7. The negative coefficients of time are statistically significant for company 01, 02,03,10,11 and 13.

8. The functions shift downward at an annual rate of 30.084to 69.063 for the company 11 and 03 respectively.

It seems that these companies have failed either to upgrade skills education of labour, or upgrade organizational structure and managerial techniques to match the requirement of new technology which prevents them from the realization of full benefits of new technology.

The estimates of OLS regressions of Debt to fixed capital ratio of company wise

The OLS estimates equations are reported below

Table – 5

		intercept	Time	R square	F	F significance
Company 1	coefficient	7.058	1.218	0.203	7.124	0.013
	t value	2.026	2.669			
Company 2	coefficient	13.422	0.246	0.008	0.236	0.631
	t value	2.932	0.486			
Company 3	coefficient	3.103	1.553	0.173	5.874	0.022
	t value	0.582	2.424			
Company 4	coefficient	-9.316	2.160	0.620	45.677	0.000
	t value	-2.447	6.759			
Company 5	coefficient	7.618	1.450	0.228	8.289	0.008
	t value	2.464	2.879			
Company 6	coefficient	5.759	0.927	0.674	57.953	0.000
	t value	3.636	7.613			
Company 7	coefficient	17.593	-0.372	0.015	0.423	0.521
	t value	4.879	-0.650			
Company 8	coefficient	15.876	-0.009	0.007	0.184	0.672
	t value	8.577	-0.429			
Company 9	coefficient	25.411	-3.886	0.416	19.969	0.000
	t value	9.982	-4.469			
Company 10	coefficient	2.688	0.711	0.903	260.596	0.000
	t value	2.850	16.143			
Company 11	coefficient	4.438	1.786	0.441	22.134	0.000
	t value	1.675	4.705			
Company 12	coefficient	-0.920	2.082	0.205	7.222	0.012
	t value	-0.147	2.687			
Company 13	coefficient	15.799	-0.021	0.000	0.006	0.941
	t value	3.639	-0.074			
Company 14	coefficient	11.771	0.830	0.159	5.310	0.029
	t value	5.336	2.304			

Source: author's own calculation (Excel & SPSS) *significance level 0.05, **table value of t 1.706

The table 5 shows that

1. The regression function of debt to fixed capital ratio of the companies 02,07, 08 and 13 does not fit the data well;
2. The coefficients of correlations and coefficients of time are not statistically significant for company 02, 07 08 and 13.
3. The regression function of debt to fixed capital ratio of the companies 01,03,04,05, 06,09,10,11,12, and 14 fit the data well;
4. The function explains the variation of minimum and maximum 15.9% to 90.3% for the company 14 and 10 respectively.
5. The positive coefficients of time are statistically significant for company 01, 03, 04, 05 06, 10, 11, 12 and 14.
6. The functions shift upward at an annual rate of 0.711 to 2.160 for the company 10 and 04 respectively.
7. No one coefficients of time are negatively significant for any company.

It seems that these companies have to upgrade skills education of labour, or upgrade organizational structure and managerial techniques to match the requirement of new technology which prevents them from the realization of full benefits of new technology.

The estimates of OLS regressions of Debt to sales revenue ratio of company wise

The OLS estimates equations are reported below

Debt to sales revenue ratio
Table – 6

		intercept	Time	R square	F	F significance
Company 1	coefficient	1.166	0.008	0.797	2.400	0.013
	t value	13.471	5.549			
Company 2	coefficient	1.183	0.007	0.116	3.672	0.066
	t value	17.607	3.916			
Company 3	coefficient	0.698	0.009	0.383	17.365	0.000
	t value	18.065	4.167			
Company 4	coefficient	1.562	0.005	0.205	5.721	0.003
	t value	14.093	2.849			
Company 5	coefficient	0.975	0.006	0.014	0.388	0.539
	t value	5.843	0.623			
Company 6	coefficient	0.928	0.002	0.663	0.081	0.028
	t value	6.844	9.285			
Company 7	coefficient	1.760	0.025	0.136	4.391	0.045
	t value	2.67	3.90			
Company 8	coefficient	1.126	0.026	0.560	21.230	0.004
	t value	8.392	3.411			
Company 9	coefficient	1.042	0.027	0.772	95.063	0.000
	t value	21.058	9.750			
Company 10	coefficient	1.259	0.002	0.012	0.342	0.564
	t value	16.775	1.584			
Company 11	coefficient	1.126	0.026	0.294	11.638	0.002
	t value	8.392	3.411			
Company 12	coefficient	1.929	0.049	0.804	114.814	0.000

	t value	23.844	10.715			
Company 13	coefficient	1.389	0.011	0.099	3.071	0.091
	t value	12.917	1.752			
Company 14	coefficient	0.655	0.003	0.006	0.175	0.679
	t value	5.550	0.419			

The table 5 shows that

1. The regression function of debt to sales revenue ratio of the companies 05,10, 13 and 14 does not fit the data well;
2. The coefficients of correlations and coefficients of time are not statistically significant for company 05, 10, 13 and 14.
3. The regression function of debt to sales revenue ratio of the companies 01,02,03,04, 06, 07, 08 09,11 and 12 fit the data well;
4. The function explains the variation minimum and maximum 11.6% to 80.4% for 02 and 12.
5. The positive coefficients of time are statistically significant for companies 01,02,03,04, 06, 07, 08 09, 11 and 12.
6. The functions shift upward at an annual rate of 0.002 to 0.049 for 06 and 12 respectively.
7. No one coefficients of time are negatively significant for any company.

These inferences that these companies have to upgrade skills education of labour, or upgrade organizational structure and managerial techniques to match the requirement of new technology which prevents them from the realization of full benefits of new technology.

Conclusion:

- The regression function of debt to total capital ratio of the companies 01,02,03,05, 07,09,10,11,12,13 and 14 fit the data well;
- The function explains the variation minimum and maximum 11.9% to 78.8% respectively.
- The regression function of debt to fixed capital ratio of the companies 01,03,04,05, 06,09,10,11,12, and 14 fit the data well;
- The function explains the variation minimum and maximum 15.9% to 90.3% respectively.
- The positive coefficients of time are statistically significant for company 01, 03, 04, 05 06, 10, 11, 12 and 14.
- The function explains the variation minimum and maximum 11.6% to 80.4% for 02 and 12.
- The functions shift upward at an annual rate of 0.002 to 0.049 for 06 and 12 respectively.

It seems that these companies have to upgrade skills education of labour, or upgrade organizational structure and managerial techniques to match the requirement of new technology which prevents them from the realization of full benefits of new technology.

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