CAPITAL STRUCTURE AND FIRM'S FINANCIAL PERFORMANCE: A STUDY OF SRI LANKAN MANUFACTURING SECTOR

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Abstract

This research paper attempts to investigate the impact of capital structure on firm's financial performance based on the manufacturing companies listed in Colombo Stock Exchange (CSE). Annual data were collected from published financial statements relating to 20 sample companies selected using systematic sampling technique operating in manufacturing industry. Descriptive statistics, Correlation and Regression analyses were used as statistical tests to reveal the relationship and the association between the variables. Debt to Equity (DE) and Debt to Total Assets (DT) ratios were used as proxies for capital structure while Gross Profit Margin (GPM), Net Profit Margin (NPM), Return on Assets (ROA) and Return on Capital Employed (ROCE) were used as proxies for financial performance. The results confirm that only ROCE is positively and significantly related with both DE and DT while there is a negative correlation between GPM, NPM and ROA with DE and DT. In conclusion, capital structure is not a major determinant factor affecting the firm's financial performance where it's evident that there is no significant association between capital structure components and firm's financial performance. The results are in support of some literature and are contradictory with some as well.

Keywords: Capital Structure, Financial Performance, Developing Markets, Colombo Stock Exchange

1 INTRODUCTION

Interpretation of capital structure may vary from Equity Capital and Debt Capital to Fixed Capital and Working Capital. A firm's most fundamental resource is its Cash Flows generated through its assets, where cash flows in terms of finance are more specifically referred to as 'Free Cash Flow'. Strictly speaking, total cash flow may not belong to one stream. Thus, when the firm is financed entirely by Common Stock, all of those cash flows belong to the shareholders, i.e. Free Cash Flow to Firm (FCFF) is equal to Free Cash Flow to Equity (FCFE). Conversely, if a firm has issued both Equity and Debt securities, a portion of the total cash flow belongs to the shareholders and the remaining portion to the debt holders such as trade creditors, financial institutions and so on. Therefore, to a firm, defining the optimal capital structure is of critical importance. Simply, a firm needs to determine "Are we financing all the assets through equity or debt or through both?" Hence, the decision may be to make the choice of an appropriate mix provided that a firm decides to use both equity and debt capital.

Capital structure plays an important role in determining the risk level of the company, which is in particular the financial risk as such risk depends on the types of securities issued. Operating leverage is the key determinant factor of business risk where for instance, a manufacturing company bears a lesser portion of fixed costs compared to that of a

telecommunication company. Thus. business risk is relatively lesser in a manufacturing company. So on such grounds. the management`s task is to keep the fixed costs as low as possible along with standing tall against market competition and producing products with high standards that would safeguard product liability to reduce the business risk. When a firm issues shares the owner funds will increase. where the loaner funds will see a rise when it borrows money form the market using some instruments other than shares. such as Commercial papers, Debentures. Corporate bonds etc. In simple terms. more debt would lead to high financial risk concentrating business risk on shareholders.

Financial Performance on the other hand is reflected by a firm`s earnings. The capital structure decision is a significant managerial decision. as it influences the financial return and risk of a firm. Therefore. the study of the capital structure and the financial performance is of pivotal relevance. This research study will be significant to the management of a company (especially for manufacturing sector) in deciding the right combination of Debt and Equity to finance their operations and to maximize Firm Value at the same time contributing towards the development of the Sri Lankan economy.

1.1 Research problem

The purpose of this research is to investigate the impact of a firms` capital structure on the financial performance in case of the manufacturing sector of CSE. Data collected from CSE listed manufacturing companies will be used for the study. The empirical research found mixed results in study of capital structure on firm`s financial performance. where some concluded that firm capital structure has a significant impact on financial performance and some concluding that there is a negative impact over the firm`s financial performance. Therefore, this research study is conducted to test this scenario furthermore in the Sri Lankan context specifically in the case of the manufacturing sector and to extend the already concluded research studies by expanding the sample size, selecting a different time period (2010-2014) as most of them were conducted during the economic recession (2008-2012) and employing models which are different to the ones employed in the previous studies. Due to the lack of studies done pertaining to this area in Southeast Asia. the studies available will be used for further analysis.

1.2 Research questions

1 Does the capital structure have an effect on the firm`s financial performance?
2 If so. to what extent does the capital structure effect the firm`s financial performance?
3 What is the nature of relationship between capital structure and financial performance?

1.3 Objectives of the study

3.1 To reveal the impact/association of capital structure on financial performance
3.2 To identify the nature and the degree of relationship between capital structure and financial performance

1.4 Significance of the study

This research will examine how capital structure may have an impact on manufacturing companies` financial performance. Financial performance measurement is the base of investing and financing decisions. Investors are interested in appraising the company performance to get an understanding of successfulness of management in the application of their capital which is equity. Debt holders, on the other hand evaluate performance to decide about the interest rate which is their fixed return. There are various methods of long term

financing such as share issues. debentures and long term loans. So. a firm should have a good understanding about its capital structure.

1.5 Scope of the study

This research will be conducted taking into account the listed companies in manufacturing sector in Sri Lanka. From the manufacturing sector. 20 companies out of 40 are selected to collect data from CSE database and conduct the research accordingly. covering quarterly data from 2007-2014.

2. LITERATURE REVIEW

Empirical literature on the relationship and the association between firm's financial performance and capital structure has produced mixed results. Some research studies have been found a positive relation between financing choices and financial performance (profitability). With those mixed and conflicting results, the question for examining the relationship and association between capital structure and firm's financial performance has remains a puzzle and therefore, empirical study continues in search of the true impact.

2.1 Empirical research studies

The results or findings of the research studies which were conducted previously by many researches most probably include the effect of economic recession which might not have given accurate results because these types of economic changes do not occur very often. Thus, already conducted research studies have produced pretty much a mixed bag of results where some studies have concluded that there is a positive relationship between capital structure components and financial performance measurements while some researchers have found that there is a negative relationship between capital structure components and financial performance measurements. On the other hand. with regard to regression analysis results, some studies have declared that there is an impact of the capital structure on firm's financial performance while some say that there is no significant impact on company's financial performance arising from the capital structure or the changes of structure in that matter. So this research study particularly tries to find some answers to the above mixed results and try to clear some doubts regarding the results pertaining to the manufacturing sector of Sri Lanka.

Ogebe. P. O., Ogebe, J. O., & Alewi, K. (2005). Conducted the study relating to selected Nigerian companies from year 2000-2010. A comparative analysis was carried out by the researches where they classified the selected firms as highly geared and lowly geared with a leverage threshold above 10% as highly geared. In their conclusion they confirmed that there is a negative relationship between leverage (gearing) and firm's performance in selected companies in Nigeria. Their study further confirmed that the traditional capital structure theory is valid. It affirms again that, leverage in both the highly and lowly levered firms is statistically significant and is an important determinant of firm's performance. Some others researchers concluded that the relationship is negative (Narender, et. al. 2007; Pratheepkanth, 2011: Shah. et. al. 2011; Onaolapo and Kajola. 2010; Shoaib, 2007).

Salehi. M. and Biglar, K. (2009). Are in the opinion that financing decisions is one of the important areas in financial management to increase shareholder's wealth. and thus measuring the performance of the company is of paramount importance. The research study was conducted considering 117 companies in Tehran Stock Exchange (TSE) in a 5-year time period (2002-2007). They demonstrated that capital structure influences financial

performance. The significance of the influence of capital structure on performance respectively is belonged to measures of adjusted value. market value and book value.

Pratheepkanth. P. (2011). This research study was conducted for the business companies in Sri Lanka taking into account the period from 2005 to 2009. According to the study, the Correlation analysis explains, there is a weak positive relationship between gross profit and capital structure (0.360). At the same time, there is a negative relationship between net profit and capital structure (-0.110). It reflects the high financial cost among the firms. ROI and ROA also has negative relationship with capital structure at -0.104. -0.196 respectively. The researcher concluded that there is a negative association at -0.114. Co-efficient of determination is 0.013. F and t values are 0.366. -0.605 respectively. It is reflect the insignificant level of the Business Companies in Sri Lanka.

Mohamad, N. E. A. B., and Abdullah, F. N. B. (2012). This dissertation examines the role of capital structure in determining the firm's financial performance. Two measures of capital structure; DTAR (Debt to Asset Ratio) and DTER (Debt to Equity Ratio) are used in the performance model to identify the affiliation of capital structure when regressed with ROA. ROE and ROIC with 1170 observation from companies listed in Bursa Malaysia for nine–year period from 2002 to 2010. It also investigates how firm size weights their role in influencing firm performance. Using multiple regression analysis, they concluded that capital structure is negatively significant with firms' performance from the sample of Malaysian firms are concerned.

Nirajini, A., and Priya, K. B. (2013). studies with the important objectives of to what extend capital structure impact on financial performance of companies and whether the capital structure impact in financial performance of listed trading companies in Sri Lanka. that Correlation analysis showed that debt asset ratio. debt equity ratio and long term debt correlated with gross profit margin, net profit margin, ROCE, ROA & ROE at significant level of 0.05 and 0.1. Such study concluded that there is positive relationship between capital structure and financial performance. And also capital structure is significantly impact on financial performance of the firm.

Al-Taani, K. (2013). Conducted the study to empirically investigate the relationship between capital structure and firm performance across different Jordanian manufacturing companies by way of a selected sample of 45 companies which are listed in the Amman Stock Exchange. It was carried out for the period 2005-2009 using annual financial data from the company financials. Multiple regression analysis was used to conduct the study and incorporated Return on Asset (ROA) and Profit Margin (PM) as performance measures while Short-Term Debt to Total Assets (STDTA). Long Term Debt to Total Assets (LTDTA) and Total Debt to Equity (TDE) were taken as capital structure proxies. He concluded that there is a negative and insignificant relationship between STDTA and LTDTA, and ROA and PM; while TDE is positively related with ROA and negatively related with PM. STDTA is significant using ROA while LTDTA is significant using PM. Eventually the study concludes that statistically. capital structure is not a major determinant of firm performance.

Nimalthasan, P. and Kajananthan, R. (2013). This study was carried out for the listed manufacturing companies in Sri Lanka considering the period 2008-2012. GPM, NPM, ROE and ROA were used as proxies for financial performance while DE and DA ratios were used as capital structure proxies. The results show that GPM, NPM, ROE and ROA are not significantly correlated with DE ratio and GPM and ROE are significantly correlated with DA ratio as the measures of capital structure and capital structure has significant impact on

GP and ROE. The result proves that with the increase in leverage. it negatively affects the ROE.

3. METHODOLOGY

3.1 Research design

This dissertation is an explanatory type of dissertation since there will be conclusions drawn and the degree and the nature of the relationship between variables will be explained.

3.2 Data sources and Collection techniques

Secondary data sources which are from CSE will be used to collect data for the study. Data collection will be done manually from company Annual reports. Interim financial reports, Company announcements, and Company filings from 2010-2014. For the purpose of the study, financial ratio calculation was carried out to setup information and execute the statistical tests which would be discussed in detail. It has to be noted that some of the data were not available due to unavailability of financial statements in either the CSE or the company website, thus only 93 observations were drawn initially for the study. Out of that, only 62 observations remained for the study because the rest were removed to be in compliance with data normality.

3.3 Sampling techniques

Systematic sampling technique was used in the process of selecting a sample set of companies to represent the Manufacturing sector. As at this study date, there are 40 companies listed in the CSE under manufacturing sector from which 20 companies are selected.

3.4 Definition of Key terms, Concepts and Variables

Conceptual model

Financial ratio analysis was chosen as a financial performance measurement and indicator since this analysis provides methods for assessing the financial strengths and weaknesses of the firm's performance using information that are found in the company financial statements. The selection of the variables is primarily guided by previous empirical studies and the availability of data from CSE. Four profitability ratios were used to measure firm's financial performance namely GPM, NPM, ROA and ROE as a proxy for firm's financial performance. Profitability is used as a measurement for corporate performance because it evaluates the efficiency with which non-current assets and current assets are transformed into profit. The independent variables representing capital structure are used to assess their impact on firm`s performance, are ratio between DE and ratio between DT.

1. Capital Structure

I) Ratio between Debt and Equity (DE)

$$\frac{\text{Debt}}{\text{Equity}} * 100$$

II) Ratio between Debt and Total Investment (DT)

$$\frac{\text{Debt}}{\text{Total Investment}} * 100$$

2. Financial Performance

I) Gross Profit Margin (GPM)

$$\frac{\text{Gross Profit}}{\text{Sales}} * 100$$

II) Net Profit Margin (NPM)

$$\frac{\text{Net Profit}}{\text{Sales}} * 100$$

III) Return on Assets (ROA)

$$\frac{\text{PAIT}}{\text{Total Assets}} * 100$$

IV) Return on Capital Employed (ROCE)

$$\frac{(\text{PBT} + \text{Finance Expenses})}{(\text{Total Assets} - \text{Current Liabilities})} * 100$$

3.5 Data analysis and Interpretation

For this dissertation study, Correlation Analysis, Multiple Regression Analysis and Descriptive Statistics would be used to identify and examine the relationship and dependency or the association between variables with the association of the software programme 'Statistical Package of Science Social (SPSS)' considering Capital Structure as the Independent variable and Financial Performance as the Dependent variable.

3.6 Developed hypotheses

Table 1: Developed hypotheses

H 1:	There is a positive relationship between DE ratio and GPM	H 9:	There is an association between DE ratio and GPM
H 2:	There is a positive relationship between DT ratio and GPM	H 10:	There is an association between DT ratio and GPM
H 3:	There is a positive relationship between DE ratio and NPM	H 11:	There is an association between DE ratio and NPM
H 4:	There is a positive relationship between DT ratio and NPM	H 12:	There is an association between DT ratio and NPM
H 5:	There is a positive relationship between DE ratio and ROA	H 13:	There is an association between DE ratio and ROA
H 6:	There is a positive relationship	H 14:	There is an association between DT ratio and ROA

	between DT ratio and ROA		
H 7:	There is a positive relationship between DE ratio and ROCE	H 15:	There is an association between DE ratio and ROCE
H 8:	There is a positive relationship between DT ratio and ROCE	H 16:	There is an association between DT ratio and ROCE

This study employs the basic Ordinary Least Square (OLS) regression model, represented as;

3.7 Model specification

Model 1: GPM = $\beta 0 + \beta 1\ DE + \beta 2\ DT + \varepsilon$

Association between Gross Profit Margin and both Debt to Equity ratio and Debt to Total Assets ratio.

Model 2: NPM = $\beta 0 + \beta 1\ DE + \beta 2\ DT + \varepsilon$

Association between Net Profit Margin and both Debt to Equity ratio and Debt to Total Assets ratio.

Model 3: ROA = $\beta 0 + \beta 1\ DE + \beta 2\ DT + \varepsilon$

Association between Return on Assets and both Debt to Equity ratio and Debt to Total Assets ratio.

Model 4: ROCE = $\beta 0 + \beta 1\ DE + \beta 2\ DT + \varepsilon$

Association between Return on Capital Employed and both Debt to Equity ratio and Debt to Total Assets ratio.

4. FINDINGS AND DISCUSSIONS

4.1 Normality test

Shapiro–Wilk test proves all the regressors except for the ROA independent variable (where the p value is more than 0.010 or 10% on the GPM, NPM and ROCE regressors and less than 10% on the regressor ROA), that there is normality in the distribution of errors which are conditional on the regressors. Therefore, it can be concluded that the normality assumption is valid in this research study. For this study, initially 93 observations were drawn from the sample of 20 companies over a period of 5 years where some of the data were deleted (that would reduce the number of observations to 62) for the objective of keeping the Normality assumption intact. These deleted observations in were mostly due to them being outliers from the general sample. In statistics, an outlier is an observation point that is distant from other observations.[1] An outlier may be due to variability in the measurement or it may indicate experimental error; the latter are sometimes excluded from the data set.

[1] Grubbs, F. E. (February 1969). Procedures for detecting outlying observations in samples, Technometrics 11 (1): 1–21. "An outlying observation, or "outlier." is one that appears to deviate markedly from other members of the sample in which it occurs"

4.2 Multicollinearity test

According to the regression analysis of this study there is no multicollinearity among the independent variables since the Variance Inflation Factor (VIF) value is very closer to 1.000 (Where VIF = 1.060). This is discussed under the Regression Analysis of this paper. There are 2 underlying assumptions that are related with the No multicollinearity assumption. First one being Assumption number 07: which says that 'Number of observations in the sample must be greater than the no. of regressors.' This assumption is valid in this research study as the no. of observations (n = 62) are more than the number of regressors (2 regressors; DE and DT). The other assumption is that, Assumption 08; 'Sufficient variability in the values of the regressors, for they are intimately related to the assumption of no multicollinearity.' According to the results, it is evident that there is significant variability in the values of DE ratio and DT ratio. Therefore, it can be said that assumption no. 08 is also valid leading to the conclusion that there is no multicollinearity.

4.3 Autocorrelation test

As found in the 4 models discussed under regression analysis, only model 1 shows some degree of negative serial correlation and all the other models shows no correlation between the error terms. This finding can be observed in referring Table 3, Table 6, Table 9 and Table 12. Therefore, in conclusion we can say that the 'No Autocorrelation between disturbances' assumption (Assumption no. 05) is valid in this study.

4.4 Testing for other important OLS assumptions

Conforming to this study, this assumption is held valid since associated power is 1 in the parameters. Assumption no. 09 requires the regression model be correctly specified. The regression model in this research study was cautiously developed based on the previous empirical literature. Thus, it is appropriate to say that this assumption too is valid for this study.

4.5 Descriptive analysis

Table 2: Descriptive analysis

	N	Range	Minimum	Maximum	Mean		Std. Deviation
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic
DE	62	5.49	-2.24	3.25	1.1216	.10692	.84190
DT	62	1.71	.10	1.81	.5229	.03286	.25871
GPM	62	.35	.02	.37	.1689	.01017	.08006
NPM	62	.21	-.03	.18	.0550	.00679	.05346
ROA	62	.16	-.02	.14	.0565	.00542	.04266
ROCE	62	.42	-.03	.39	.1666	.01214	.09556

It is evident that on average the gross profit margin of the sample companies is approximately 17% which shows good operational performance by such companies. But, there are companies where the gross profit margin is as less as just 2% and some as high as 37% which results in a higher range of performance. The net profit margin and the return on assets sits at

an average of 5.5% and 5.65% respectively which shows low performance due to bad management practices that may be resulting from poor administration and bad financing where the finance costs are higher resulting in lower net profit or return. There are instances where the net profit margin and the return on assets have recorded negative figures as well which again indicate loss making situations by such sample company/s.

On average. the return on capital employed is 16.67% which is a healthy figure. Since there is a huge variance between return on capital and return on assets. it can be said that there may be a high finance cost involved in firms operations resulting in lower net profit margin and the return on assets. This indicates how important the application of debt policies is in capital structure of companies and the capital market of Sri Lanka. Manufacturing sector when compared to the IT sector has a relatively low operating leverage meaning the fixed costs are relatively lower compared to variable costs. Lower operating leverage leads to lower business risk. Furthermore. the table above shows that there is some degree of financial leverage on average in the manufacturing industry. where the debt to equity ratio is approximately 1.12 (or 112%). High Financial leverage results in high financial risk (which is the additional risk that concentrates on common stockholders). This is evident in this research study. where there is a huge variance between return on capital employed and return on assets. ROCE considers the return or the income before deducting the finance costs. but the ROA considers the return which is net of finance costs (which is after the deduction of finance costs). The reason behind having a huge difference between ROCE and ROA is that the finance cost on average in manufacturing companies is higher due to more debt involved relative to equity in financing the company's business operations.

4.6 Correlation analysis

Table 3: Correlation analysis matrix

		DE	DT	GPM	NPM	ROA	ROCE
DE	Pearson Correlation	1	.238	-.060	-.255*	-.215	.505**
DT	Pearson Correlation	.238	1	-.018	-.258*	-.223	.091
GPM	Pearson Correlation	-.060	-.018	1	.615**	.371**	-.038
NPM	Pearson Correlation	-.255*	-.258*	.615**	1	.809**	.209
ROA	Pearson Correlation	-.215	-.223	.371**	.809**	1	.466**
ROCE	Pearson Correlation	.505**	.091	-.038	.209	.466**	1

As per the Correlation Matrix above which shows the relationship between each and very variable, that is the between the capital structure variables such as debt to equity ratio and debt to total assets ratio, and determinants of firm's financial performance such as gross profit margin, net profit margin, return on assets and return on capital employed. Accordingly, net profit margin has a weak negative relationship with debt to equity ratio (-0.255) as well as debt to total assets ratio (-0.258) which is significant at 5%. Return on capital employed has a moderate positive relationship (0.505) with the debt to equity ratio which has a significance of 1%. Furthermore, gross profit margin and return on assets has no significant relationship with debt to equity ratio as well as debt to total assets ratio, and at the same time there is no

significant relationship between return on capital employed and debt to total assets ratio.

Hypothesis testing: Based on the correlation results above, H9, H10, H11, H12, H13 and H14 are rejected and H15 and H16 are accepted. Therefore, in relation to H9, H10, H11, H12, H13 and H14, the Null hypothesis is accepted while in the case of H15 and H16, the Null hypothesis is rejected.

4.7 Regression analysis

Table 4: Coefficients table – Model 1

		B	Std. Error	t	Sig.	Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	.176	.025	6.995	.000	.126	.226		
	DE	-.006	.013	-.438	.663	-.031	.020	.943	1.060
	DT	-.001	.041	-.032	.974	-.084	.082	.943	1.060

The Variance Inflation Factor (VIF) is very closer to 1 meaning there is no multicollinearity among the predictors. The independent variables. Debt to Equity Ratio and Debt to Total Assets Ratio are not statistically significant in determining the gross profit margin where if the debt to equity ratio and debt to total assets ratio increases by 1, the gross profit margin will decrease by 0.006 and 0.001 respectively. The constant value is 0.176 meaning that the least squares line touches the ordinate axis at a value of Y = 0.176.

Hypothesis testing: Based on the results above, both H1 and H2 are rejected. This leads to accepting the Null hypothesis meaning that there is no association between GPM and DE as well as GPM and DT.

Table 5: Coefficients table – Model 2

		B	Std. Error	t	Sig.	Lower Bound	Upper Bound	Tolerance	VIF.
1	(Constant)	.092	.016	5.801	.000	.060	.124		
	DE	-.013	.008	-1.620	.111	-.029	.003	.943	1.060
	DT	-.043	.026	-1.649	.104	-.096	.009	.943	1.060

The variance inflation factor is very closer to 1 meaning there is no multicollinearity between the independents. The predictors are not significant (0.111 and 0.104) in predicting the changes in the dependent variable. The constant= 0.092, means that the least squares line touches the X – axis at a value of 0.092. When the DE ratio increases by 1, the NPM would decrease by 0.013 while such increase in DT ratio would see a decrease of 0.043.

Hypothesis testing: Based on the results above, both H3 and H4 are rejected. Null hypothesis is accepted in both situations. This means that there is no impact between NPM and DE as well as NPM and DT.

Table 6: Coefficients table – Model 3

		B	Std. Error	t	Sig.	Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	.082	.013	6.353	.000	.056	.108		
	DE	-.009	.007	-1.330	.189	-.022	.004	.943	1.060
	DT	-.030	.021	-1.414	.163	-.073	.012	.943	1.060

The variance inflation factor is very closer to 1 meaning there is no multicollinearity between the independent variables. If the DE and DT ratio increase by 1, then the ROA would decrease by 0.009 and 0.030 respectively. Also, if DE and DT is zero, then the expected value for output is 0.082. It can be said that the regressors are not significant (0.189 and 0.163) in predicting the changes in the dependent variable.

Hypothesis testing: Based on the results above, both H5 and H6 are rejected. Null hypothesis is accepted in this case. The test assures that there is no association between ROA and DE, and ROA and DT.

Table 7: Coefficients table – Model 4

		B	Std. Error	t	Sig.	Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	.107	.026	4.141	.000	.055	.159		
	DE	.058	.013	4.428	.000	.032	.084	.943	1.060
	DT	-.011	.043	-.266	.791	-.097	.074	.943	1.060

The variance inflation factor is very closer to 1 (1.060) meaning there is no multicollinearity between the cause variables. Debt to equity is statistically significant in determining the impact of firm performance (significant at 1%), but the debt to total assets ratio is not significant in analyzing the impact. When the DE and DT ratios are zero, predicted value or the expected ROCE would be 0.107, and when DE and DT increases by 1, the ROCE increase by 0.058 and decrease by 0.011 respectively.

Hypothesis testing: Based on the results above, H7 is accepted while H8 is rejected. It is evident that there is an association between ROCE and DE (where t value =4.428 and p value =0.000), but no association between ROCE and DT.

Table 8: Model comparison

Dependent Variable	Model 1 GPM		Model 2 NPM		Model 3 ROA		Model 4 ROCE	
Independent Variable	t	p	t	p	t	p	T	P
DE	-0.438	0.663	-1.620	0.111	-1.330	0.189	4.428	0.000
DT	-0.032	0.974	-1.649	0.104	-1.414	0.163	-0.266	0.791
R	0.060		0.326		0.278		0.506	
Adjusted R^2	-0.030		0.076		0.046		0.230	
F - Value	0.106		3.508		2.473		10.136	

The above table shows a comparison of the results of the regression analysis between the four models incorporated in this research study of 'capital structure and firm's financial performance: a study of Sri Lankan manufacturing sector'. Accordingly, overall model significance can be observed in the models 2, 3 and 4 which are significant at 5%, 10% and 1% respectively while model 1 is insignificant. Furthermore. only the individual variable DE ratio is significant with ROCE (p value = 0.000), where with 99% confidence level it can be concluded that DE ratio has a significant association with ROCE, but none of the other individual variables are significant with either GPM, NPM or ROA. Based on the model which is the best fit model according to the findings, capital structure explains only 23% of the change in the dependent variable that is the financial performance. where the unexplained portion or the error term is very high.

5. CONCLUSION

This dissertation examines the impact of capital structure on the financial performance of manufacturing companies listed in the Colombo Stock Exchange (CSE) which relates to the Sri Lankan economy. OLS assumptions were tested on this research study. In testing for normality, the results revealed that the normality assumption is valid pertaining to this study. It concluded that all the regressors except for the ROA independent variable (where the p value is more than 0.010 or 10% on the GPM, NPM and ROCE regressors and less than 10% on the regressor ROA), that there is normality in the distribution of errors which are conditional on the regressors. Tests for multicollinearity, autocorrealtion revealed that there is neither multicollinearity nor autocorrelation. In testing for other OLS assumptions. it was found that the regression model is correctly specified in consistent with previous literature as well as the model is linear where it is proved that the model is Linear in parameters. The results show that net profit margin has a weak negative relationship with debt to equity ratio (-0.255) as well as debt to total assets ratio (-0.258) which is significant at 5%. Return on capital employed has a moderate positive relationship (0.505) with the debt to equity ratio which has a significance of 1%. Gross profit margin and return on assets has no significant relationship with debt to equity ratio as well as debt to total assets ratio. and at the same time there is no significant relationship between return on capital employed and debt to total assets ratio. The net profit margin and the return on assets averages only 5.5% and 5.65% respectively which shows low performance due to bad management practices that may be resulting from poor administration and bad financing where the finance costs are higher resulting in lower net profit or return. There is a huge variance between return on capital and return on assets, which says there may be a high finance cost involved in firms operations resulting in lower net profit margin and the return on assets.

Neither there was multicollinearity between the independent variables. nor autocorrelation between the residuals. The Shapiro Wilk tests proved that the dependent data is generally distributed normally with the regressors. Only return on capital employed has an impact from the changes of debt to equity ratio of manufacturing companies where the model is significant at 1% and a change of 1 in the debt to equity ratio would result in an approximate change in ROCE of 6%. Nevertheless. capital structure components can only explain only 23% of the changes in the ROCE. This means there are other factors affecting the financial performance of manufacturing companies. So. in conclusion it is safe to say that Capital Structure is not a major determinant factor of the Financial Performance of manufacturing companies listed in the Colombo Stock Exchange. The hypothesis testing revealed that the hypotheses H15. H16 and H7 are accepted rejecting the Null hypothesis for each while hypotheses H9. H10. H11, H12, H13. H14, H1, H2, H3. H4, H5. H6 and H8 are rejected which are alternative hypotheses. Hence, for each of those scenarios the Null hypothesis is accepted.

The conclusion is consistent with some research studies done by (Al-Taani. 2013). (Kajananthan and Nimalthasan, 2013), (Pratheepkanth, 2011) etc. The results of this research study can be validated or can be held consistent with the above mentioned empirical studies as such studies were also carried out during the post Global Financial Crisis (Financial Crisis 2007-2008) similar to this study. The results are also consistent with the "Pecking Order theory" as well which emphasizes that leverage is negatively related with firm's profitability as high level of debt decreases the firm's financial performance and vice versa. But. the present results in this study are in contradiction to some of the previous studies as well because of the mixed results observed in the research studies. Nevertheless, I hope that the result can contribute in identifying how the financial performance of Sri Lankan manufacturing companies be effected by their choice of capital structure. and that the management would give more emphasis in finding other factors that would affect the financial performance of such companies as the results revealed that there are other factors affecting the financial performance of the company because of the huge unexplained portion by the capital structure models.

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