



The Relationship between Financial Leverage and the Performance of Sri Lankan Listed Manufacturing Companies

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Abstract

Purpose: The objective of this study is to examine the impact of financial leverage on the performance of listed manufacturing companies in Sri Lanka.

Methodology: The present study employed ratio analysis to examine whether the financial leverage in listed manufacturing firms in Sri Lanka affected their performance involving the financial performance indicators of return on assets (ROA), return on operating assets (ROOA), return on net operating assets (RNOA), return on equity (ROE) and the impact on the financial level indicators as the debt to equity (DE) and financial spread.

Findings: The results found both a positive and negative relationship between financial leverage and the firms' performance using two different methods of analysis (overall business analysis and main business analysis). The overall business analysis showed a positive relationship between financial leverage and firm performance, which supports the agency cost theory of financial leverage, whereas the main business analysis showed a negative relationship between financial leverage and the firms' performance.

Originality/Value: The article presents significant evidence in terms of its scrupulous approach towards checking the toughness of results. The article offers insights to the capital structure and the performance of manufacturing companies in Sri Lanka which helps to investors, managers and debtors on their investment decision.

Introduction

Financial leverage gives value to the organization because of the interest tax shield offered with corporate tax by most governments. Organizations need to evaluate the amount of debt capital they require by examining their needs and the financial market. To achieve this, they can decide on the appropriate capital structure policy on the basis of the financial instruments available in the financial market. The use of financial leverage varies according to the functions of business activities. The evaluation of the capital market structure is important for the success of the organizational process. However, borrowing incurs interest expense and risk, it can also yield rewards. Even debt capital indicates the risk due to interest and unexpected bankruptcy and helps to increase organisations' routine business activities. Therefore, an examination of the capacity for leverage in an organization is important for the sustainability and success of its organizational activities.

The debt capital structure decisions of an organization depend mainly on its company policy. Some organizations are interested in both equity capital and debt capital, while some are highly interested in the former and not so much the latter, and vice versa. Company policy on capital structure can be affected by market conditions and the capacity of the company. Therefore, the percentage of debt capital and equity capital in the capital structure is essential for the progress of business operations and the sustainability of the business process.

Capital structure in an organization depends on the nature of the industry. If new firms can enter the industry without barriers, then the profit margins of existing firms in the industry could be badly affected. Therefore, the firms will find risky securities on their investments in business operations. Thus, the stability of cash flow in an organization will affect its capital structure. If an organization's cash flow is relatively stable, there may be no difficulties in covering the organization's fixed assets obligations. Therefore, many organizations that have stable cash flows can make use of the benefit of using leverage on their business operations. The sources of financing used by organizations can be affected by the maturity structure of the assets of the organization. It follows that, if the organization has a higher amount of

long-term assets in their business operations, then the firm will have to have more long-term debt.

It has been argued that equity capital should be increased in a company (Leon, 2013) because the higher leverage can help to increase the financial performance measures. However, some organizations have been afraid to receive debt capital due to the risk of debt and, therefore, have had zero leverage in their organizations. Lee and Moon (2011) found that after adjusting for the Fama-French and Carhart factors, debt-free organizations had a tendency to have higher performances in the long-term, which suggests that to maintain a zero-leverage policy in an organization, it is necessary to gain equity returns.

A considerable portion of companies in developed countries have preferred zero leverage while having equity capital in their capital structure (Ghose and Kabra, 2016), and have obtained certain benefits in being zero leveraged. These organizations have studied the benefits of zero leverage before preparing the documents that contain the capital structure of the organization. While some organizations have preferred zero leverage, there are some who need debt for their business operations. Therefore, organizations need to estimate the optimal level of company debt and maintain control over their debt capital. However, agency theory suggests that the choices of capital structure in an organization helps to reduce the agency cost (Berger and Patti, 2006). Accordingly, the agency cost hypothesis proposes that high a level of leverage in an organization reduces the agency cost of outside equity and increases the firm's value (Berger and Patti, 2006; Jensen and Meckling, 1976)

Previous studies have shown evidence of the impact of leverage on many disciplines, such as, the relationship between leverage and firm growth (Lang et al., 1996), relationship between leverage and firm investment (Aivazian et al., 2005; Myers, 1977), financial leverage among competitive companies (Yang et al., 2019), leverage and market competition (Seo, 2018), financial leverage and customer satisfaction (Malshe and Agarwal (2015), zero leverage (Devos et al., 2012; Lee and Moon, 2011;

Morais et al., (2019), and leverage and firm performances (Arafat et al., 2013; Berger and Patti, 2006; Fosu, 2013; Seo, 2018) in different regions.

Despite a number of studies have shown evidence of a positive and negative relationship between financial leverage and firm performance for different regimes, there has been no agreement to date on this question. It is worth noting that studies have found a lack of evidence for the relationship between financial leverage and firm performance in the Sri Lankan capital market. The present study helps to provide additional evidence to the existing literature and for the investors in Sri Lanka in order to identify over- and underleveraged firms in the market. Hence, the objective of this study was to assess the impact of elements of financial leverage on firms' performances with respect to the following research question: how has leverage contributed to the performance of manufacturing companies in Sri Lanka.

Studying manufacturing companies may make a significant evidence to the investors since manufacturing represents the growth of the country (Aivazian et al., 2005). Accordingly, this paper extends previous analyses by using ratio analysis derived from the reformulated financial statements among the manufacturing firms in Sri Lanka to examine the relationship between financial leverage and firm performance, and to provide evidence to existing literature through Sri Lankan market.

Literature Review

It is difficult to find a universal theory for capital structure since there is no value reason to decide the debt and equity level in a firm; however, previous studies that have investigated firm debt that have included trade-off theory (Myers, 2001), free cash flow theory (Aivazian et al., 2005) and agency cost theory (Aivazian et al., 2005; Berger and Patti, 2006; Myers, 2001). Among these, agency cost theory has been one of the most popular among researchers who have used it to identify the debt impact in a firm (Aivazian et. al., 2005; Arafat et al., 2013; Berger & Patti 2006; Myers, 2001). Agency cost theory proposes that a high level of leverage reduces the agency cost while increasing a firm's performance, (Aivazian et al., 2005; Berger and Patti, 2006;

Jensen and Mackling 1976). Agency cost is reduced through higher leverage because of the pressure from generating cash inflow (Jensen, 1986). Furthermore, leverage can reduce the conflict of interest between managers and shareholders when it is used to make investment decisions (Myers, 1977). The literature has revealed a positive relationship between firm leverage and firm performance with the assumption of agency cost theory (Berger and Patti, 2006; Fosu, 2013) in different countries, and the present study examined the relationship between firm leverage and firm performance using agency cost theory.

Stakeholders often consider a company's debt ratios when they make investment decisions. This is because a higher debt equity ratio is an indication of the higher amount of leverage in an organization. Thus, Safieddine and Titman (1999, p. 548) stated that the "leverage increases appear to be part of the targets' defensive strategies". They believed that the when the leverage increases in a firm there is a higher probability of a decrease in its performance. Therefore, companies must be careful when deciding on the amount of leverage they take since it is controversial to make the decision based on financial leverage.

One study has noted that zero leverage is good in the initial stage of a business (Devos et al., 2012), while explaining that zero-leverage firms are risk-free, including the disadvantage of a higher tax return and less likelihood of building up their reputation. Most of the traditional and self-disciplined companies have preferred zero leverage while considering low over-investment because they have liked to away from borrowing. Eventually, they have preferred huge investments which make more profit in order to match their debt capital. Therefore, the management decisions in firms have supported the maintenance of zero leverage while expecting high performance in the long-term (Lee and Moon, 2011).

Furthermore, Morais et al., (2019) discussed the external and internal factors which can cause zero leverage and found that it was influenced by the financial system and macro-economic conditions of a country. However, the financial structure of an organization can impacts on the success of its business operations. Furthermore,

Gonzalez (2012) discussed in his results that the financial structure can influence the relationship between leverage and firm operating performance in an organization. Moreover, it is very important to a company to be listed in the market, which as this makes it easier for them to acquire debt financing (Schoubben and Hulle, 2011).

Furthermore, it is much vulnerable for all listed firms to consider the factors that influence them when they decide the level of debt. Weill (2007) discussed institutional factors that may influence the relationship between leverage and performance; one such factor is a firm's access to bank credit. This is because firms facing difficulties in accessing credit. It defines access to banking credit as the ratio between the claims of deposit banks in the private sector and the gross domestic production. Eventually the access to bank credit, and the powers of the legal system will also influence the relationship between leverage and performance. Moreover, the principal amount and interest payments on a business loan, which are classified as business expenses, thus, can be deducted from company income taxes. With the payback of the debt obtained, organizations have to pay interest, sometimes at a high interest rate. With this payment of high interest and debt, organizations may face financial distress due to higher expenses. As a result, if the organizations are poor in their business operations, they may face higher financial distress.

Other than internal factors which may affect firm leverage and firm performance, other external factors also need to be considered. Ghosh (2008) explained that weaknesses in macroeconomic policies and financial market frictions can lead to higher instability in the operating activities in emerging markets compared to those in mature markets. Morais et al. (2019) also supported the evidence that macroeconomic factors can have significant influence on firm leverage. Furthermore, Kizildag and Ozdemir (2017) argued that firm-specific factors can have a significant influence on a firm's short-term leverage, and that macroeconomic indicators are the most influential factors in the long-term leverage in a firm. This also makes financial contracting complicated and can limit the available sources of funding for local firms. Finally, the firm should consider the entire external environment, such as the

political situation (Gonzalez, 2012), economic conditions and socio-cultural tendencies, before using debt financing for the organization (Hussan, 2016).

As one reason for growth of organizational performance, higher debt capital can cause financial distress and bankruptcy due to the large interest payments. Because if firms more reliable on debt can cause higher cash outflow as interest payment and with the unconcern market condition this can cause bankruptcy (Malshe and Agarwal, 2015). Financial distress can become more important than the disciplinary role of debt because firms with more debt may have greater operating difficulties (Gonzalez, 2012). Ghosh (2008) pointed out that one weakness of organizations is finding equity financing for their organization. Therefore, when the company faces difficulties in finding equity financing, it is likely to moves to debt financing. Consequently, such a company takes loans beyond its debt limit, it may face bankruptcy. Furthermore, Weill (2007) explained that public policy can show a significant relationship with firm performance because policy implications that promote equity can help firms to be financed. Singha and Faircloth (2005) suggested that higher leverage can influence lower long-term capital investments, which can cause low corporate performance in the future. The findings of their study supported the evidence (Gonzalez, 2012; Leon, 2013) of significant and negative correlations between leverage and the future growth rate in earnings per share, between leverage and future growth opportunities, and between leverage and net profit margins.

On the other hand, Ghosh (2008) found that the organizations with a low leverage ratio can lead to a low cost of foreign borrowing, which can cause a sudden failure in investor confidence. Furthermore, some studies have found a positive relationship between financial leverage and firm performance (Al-Duais, 2016; Fosu, 2013; Gonzalez, 2012; Weill, 2007). Al-Duais (2016) found a positive relationship between financial leverage and corporate performance. Al-Duais (2016) also confirmed that companies can manage and finance various operations in the long- and short-term using a mixture of both long- and short-term debt.

Determining the capital structure mix in order to improve a firm's performance has been a contentious topic in the financial literature. A number of studies have investigated the relationship between firm leverage and firm performance, and have also discussed the positive, negative and null relationships that can exist between these variables. For the companies registered on the Colombo Stock Market, the research has shown an inverse relationship between firm leverage and firm performance. Therefore, investigating the impact of firm leverage on firm performance is significant for sound organizational success.

Research Methodology

This study used regression analysis to test the agency cost hypothesis that a higher leverage decreases the agency cost with the association of improvement in firms' performances. The literature employees' different approaches to measure the firm's performance with the prediction of agency cost hypothesis.

Previous researchers have identified different variables to examine the impact of financial leverage on firm performance. Most of these studies have employed return on assets (Arafat et al., 2013; Aruna and Warokka, 2013), return on equity (Arafat et al., 2013; Berger and Patti, 2006), and return on operating assets (Gonzalez, 2012) to describe the firms' performance, and debt to equity (Aivazian et al, 2005; Arafat et al., 2013; Aruna and Warokka, 2013) to examine financial leverage. The present study extended these variables by adding return on net operating assets to the model as a firm performance indicator.

This study used a different approach to measure financial leverage. The degree of financial leverage and financial spread were used to measure the impact of financial leverage in the analysis. The analysis aimed to identify the components of the degree of financial leverage and spread that changed the financial leverage impact in the business. The regression analysis was used to identify the decomposition of the financial leverage impact for the purpose of organizational decision-making. Firms' performance indicators were explained using financial ratios which explain the

operation efficiency in the business activities. Firm size, which has been a key control variable in accounting research, was also employed as a control variable in this study and was measured through the natural log of a firm's total assets (Al-Duais, 2016; Birt et al., 2006; Sun et al., 2019). With respect to the previous studies (Aivazian et al, 2005; Al-Duais, 2016; Arafat et al., 2013; Aruna and Warokka, 2013; Berger and Patti, 2006; Birt et al., 2006; Gonzalez, 2012) on financial leverage and firm performance, a conceptual framework was developed for the analysis in the study (see Figure 1).

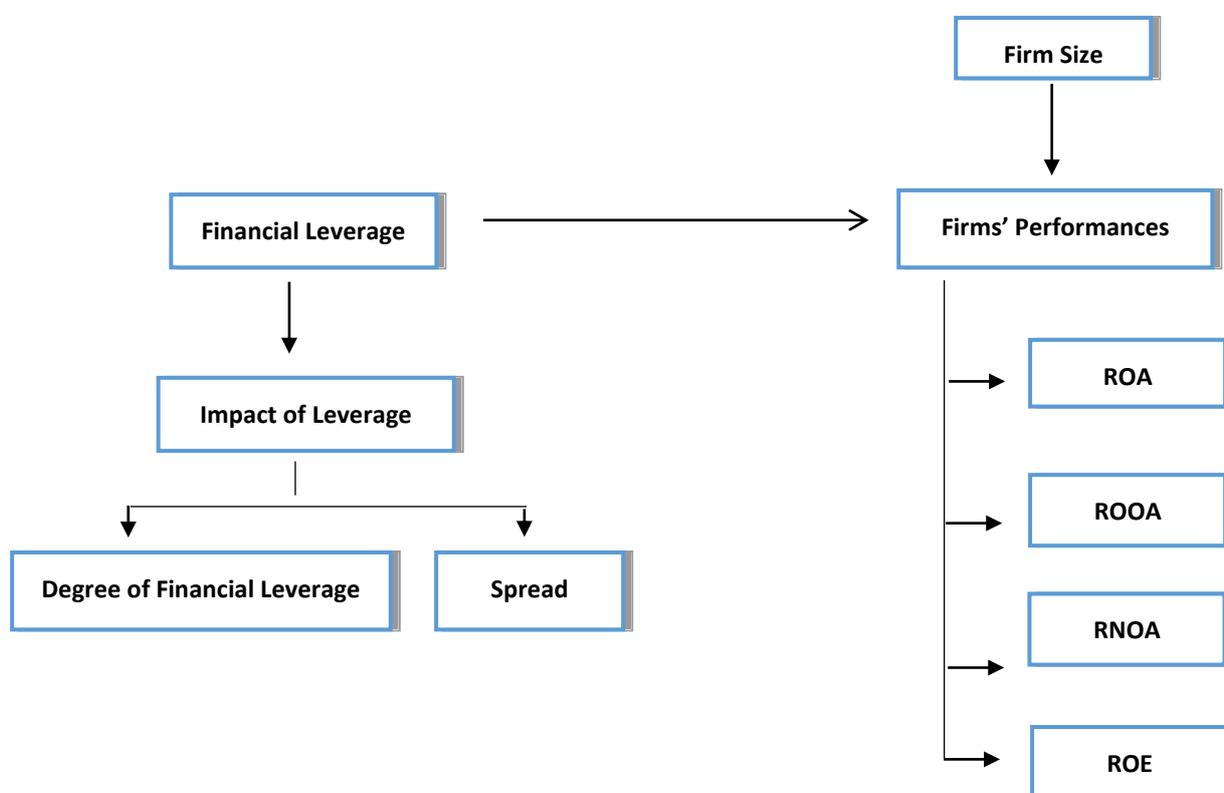


Figure 1 Conceptual Framework

In addition to the variables in the framework there have been a number of other internal and external variables identified by previous studies which may influence a firm's performance, for instance, political changes (Gonzalez, 2012), government rules and regulations (Leon, 2013), and legal factors (Gonzalez, 2012; Weill, 2007). However, it was difficult to measure all control variables in this study; therefore, firm size was used as the control variable because large firms have diversified operations

activities and business operations that are specifically controlled by managers (Frank and Goyal, 2003).

Research Hypothesis

According to the agency cost theory, a positive relationship between financial leverage and firm performance is expected (Berger and Patti, 2006; Jensen and Meckling, 1976; Myers, 2001). However, in some cases a negative relationship has also been found as a result of the significant financial limitation of high debt (Berger and Patti, 2006). The present study assumed that there was a positive relationship between financial leverage and firm performances in the use of the regression model. Accordingly, the following hypothesis was formed:

H1: There is a significant relationship between financial leverage and firms' performances:

H1a: There is a significant positive relationship between financial leverage and return on assets

H1b: There is a significant positive relationship between financial leverage and return on operating assets

H1c: There is a significant positive relationship between financial leverage and return on net operating assets

H1d: There is a significant positive relationship between financial leverage and return on equity

The regression models showed the impact of financial leverage on return on assets, return on operating assets, return on net operating assets and return on equity of the listed manufacturing companies in Sri Lanka according to the overall business operation analysis using publicly available accounting information based on published financial statements in each listed companies in Colombo Stock Exchange (CSE). The main business operation analysis was based on reformulated financial

statements for the five-year period of 2012 to 2016. Accordingly, the main equation for the model was;

$$\text{Firm (i)Performance} = \beta_0 + \beta_1 \text{ Lev. Im.} + \text{Firm Size} + \mu_i \quad (1)$$

Financial leverage impacts on firm performance were analysed using four models. Each model was analysed using the overall business analysis of publicly available accounting information and main business operation analysis using reformulated financial statements. The models equations are described as follows:

Model One - Impact of Financial Leverage on Return on Assets

The proportion of return on assets affected by the financial leverage impact is discussed with a specific model as follows:

$$ROA_i = \beta_0 + \beta_1 \text{ Lev. Im.}_i + \text{Firm Size} + \mu_i \quad (2)$$

Model Two - Impact of Financial Leverage on Return on Operating Assets

The proportion of return on operating assets affected by the finance leverage impact is discussed with a specific model as follows:

$$ROOA_i = \beta_0 + \beta_1 \text{ Lev. Im.}_i + \text{Firm Size} + \mu_i \quad (3)$$

$$ROOA_i = \beta_0 + \beta_1 \text{ Lev. Im.}_{ii} + \text{Firm Size} + \mu_i \quad (4)$$

Model Three - Impact of Financial Leverage on Return on Net Operating Assets

The proportion of return on net operating assets affected by the finance leverage impact is discussed with a specific model as follows:

$$RNOA_i = \beta_0 + \beta_1 \text{ Lev. Im.}_i + \text{Firm Size} + \mu_i \quad (5)$$

$$RNOA_i = \beta_0 + \beta_1 \text{ Lev. Im.}_{ii} + \text{Firm Size} + \mu_i \quad (6)$$

Model Four - Impact of Financial Leverage on Return on Equity

The proportion of return on equity affected by the finance leverage impact is discussed with a specific model as follows:

$$ROE_i = \beta_0 + \beta_1 Lev.Im._i + Firm\ Size + \mu_i \quad (7)$$

$$ROE_i = \beta_0 + \beta_1 Lev.Im._{ii} + Firm\ Size + \mu_i \quad (8)$$

Where;

i = firm

ROA_i = return on assets in firm i

ROOA_i = return on operating assets in firm i

RNOA_i = return on net operating assets in firm i

ROE_i = return on equity in firm i

Lev.Im._i = impact of financial leverage (overall business operation analysis)

Lev.Im._{ii} = impact of financial leverage (main business operation analysis)

μ_i = the error term

Research Sample

The study sample consisted of the manufacturing sector in Sri Lanka involving total 32 firms which were listed companies on the Colombo Stock Exchange (CSE) among 20 sectors in the CSE. The manufacturing companies were selected based on their business activities; because manufacturing companies were less likely to be affected by the regulations when compared to financial firms (Aivazian et al., 2005). The data was obtained from the financial statements disclosed by the manufacturing companies annually for the five-year period from 2012 to 2016.

Data Presentation

The data analysis used Pearson correlations and regression analysis to identify the correlations and impact among the financial leverage indicators and also to examine the impact of financial leverage on firms' performances.

Convergent Validity of Sample Data

The adequacy of the sample data was supported by the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) and Bartlett’s Test. Since the KMO was > 0.5 (.650 > 0.5), the sample was adequate enough to run the test.

Overall Business Analysis

The traditional financial statements were used for the overall business analysis to analyse the overall business performances of the firms in the listed manufacturing sectors in Sri Lanka.

Pearson Correlation for Overall Business Analysis

Pearson correlation explains the relationship between impact of leverage and firms’ performances (ROA, ROOA, RNOA and ROE) in overall business operation.

Table 4. 1 Overall Business Analysis – Pearson Correlations

		IL	ROA	ROOA	RNOA	ROE	Firm size
Impact of leverage	Pearson Correlation	1	-.174	-.038	.501**	.646***	.090
	Sig. (2-tailed)		.334	.833	.003	.000	.618
ROA average	Pearson Correlation		1	.602**	.667**	.640**	-
	Sig. (2-tailed)			.000	.000	.000	.565
ROOA average	Pearson Correlation			1	.463**	.437*	.035
	Sig. (2-tailed)				.007	.011	.845
RNOA average	Pearson Correlation				1	.908**	.055
	Sig. (2-tailed)					.000	.763
ROE average	Pearson Correlation					1	-
	Sig. (2-tailed)						.010
Firm size	Pearson Correlation						1
	Sig. (2-tailed)						.955

** p < .01 (2-tailed)

According to the overall business analysis, strong positive and significant correlations were found between the impact of leverage on RNOA and ROE. The

correlations between ROA, ROOA and leverage impact were non-significant. Similarly, the correlation between firm size and financial leverage impact was non-significant (see Table 4.1).

Regression Analysis of Leverage Impact on Firms' Performances

The regression analysis explained a significant leverage impact on RNOA and ROE. A higher R2 in the model was shown in ROE and RNOA of 41.7% and 25.1% respectively. When the control variable of firm size was taken into consideration, the regression analysis with firm size showed a non-significant impact (p > 0.05) (see Table 4.2). Accordingly, the estimated models for the firm performance indicators under the overall business analysis were as follows with the exclusion of the control variable:

$$RNOA = 0.097 + 0.996_{Leverage\ Impact}$$

$$ROE = 0.090 + 0.828_{Leverage\ Impact}$$

Table 4. 2 Overall Business Analysis - Regression

	R2	ANOVA	Coefficient	Beta value		Coefficient	Sign. value	
			Constant	Impact	size	Constant	Impact	Size
				of			of	
				leverage			leverage	
				I			I	
ROA	.038	.560	.145	-.163	-.003	.214	.365	.624
ROOA	.003	.556	.086	-.084	.003	.719	.821	.832
RNOA	.521	.013	.097	.994	.001	.633	.004	.053
ROE	.421	.000	.145	.835	-.003	.214	.000	.624
Excluding the Control Variable- Firm Size								
RNOA	.251	.003	.109	.996	-	.008	.003	-
ROE	.417	.000	.090	.828	-	.000	.000	-

Main Business Operation Analysis

Pearson correlation explains the relationship between impact of leverage and firms' performances (ROA, ROOA, RNOA and ROE) in main business operation. The main business operation analysis used the reformulated financial statements with the considerations of net financial obligations and net financial assets.

Pearson Correlation Analysis for the Main Business Analysis

According to the main business operation analysis, the firm performance indicators had significant, negative correlations with leverage impact. Therefore, the impact of leverage was negatively correlated with firm performance. Firms’ performance indicating that as the financial leverage increased, firm’s performance decreased. All other firm performance indicators showed significant relationships among the independent variables, and strong, positive correlations between the variables, excluding the relationship between firm size (see Table 4.3).

Table 4. 3 Main Business Analysis – Pearson Correlation

		IL II	ROOA	RNOA	ROE	Size
Impact of Leverage II	Pearson Correlation	1	-.368*	-.838**	-.532**	-.124
	Sig. (2-tailed)		.035	.000	.001	.493
ROOA Average	Pearson Correlation		1	.463**	.437*	.035
	Sig. (2-tailed)			.007	.011	.845
RNOA Average	Pearson Correlation			1	.908**	.055
	Sig. (2-tailed)				.000	.763
ROE Average	Pearson Correlation				1	-.010
	Sig. (2-tailed)					.955
Firm Size						1

Regression Analysis in Leverage Impact on Firms’ Performances

The regression analysis showed a significant impact of leverage on RNOA and ROE. The highest R2 of the model was shown in RNOA at 70.2%. Since the firm size was non-significant in both RNOA and ROE, the regression analysis was repeated but excluded the control variable of firm size (see Table 4.4). The estimated models for the firm performance indicators were as follows (excluding the control variable):

$$RNOA = 0.113 - 1.694_{Leverage\ Impact}$$

$$ROE = 0.113 - 0.694_{Leverage\ Impact}$$

Table 4. 4 Main Business Analysis – Regression Analysis

	R2	ANOVA	Coefficient Beta value			Coefficient Sig value		
			Constant	Impact of size leverage II	size	Constant	Impact of size leverage II	Size
ROOA	.135	.113	.123	-.756	-.001	.581	.039	.953
RNOA	.705	.000	.175	-1.706	-.003	.178	.000	.622
ROE	.289	.006	.175	-.706	-.003	.178	.002	.622
Excluding the Control Variable- Firm Size								
RNOA	.702	.000	.113	-1.694	-	.000	.000	-
ROE	.283	.001	.113	-.694	-	.000	.001	-

According to the regression and correlation analyses, the leverage impact was significant and had a negative correlation with RNOA and ROE in the main business operations.

Conclusion

The results of the overall business analysis and the main business operation analysis illustrated two different perspectives on financial leverage and firm performance. The results showed positive correlations between and a significant positive impact of financial leverage on return on net operating assets and return on equity, which support the agency cost hypothesis under the overall business analysis. Furthermore, these findings are consistent with previous literature, including Aivazian et al. (2005) and Berger and Patti (2006). However, different results from the main business analysis showed that there was a significant, negative impact of financial leverage on return on net operating assets and return on equity, which is consistent with previous studies that have provided evidence of the negative relationship between financial leverage and firm performance, including Leon (2013) and Safieddine and Titman (1999). Accordingly, the prediction of this study that there would be a significant relationship between financial leverage and firm performance was supported by both analyses. Moreover, the findings showed that there was a non-significant relationship between financial leverage and return on assets and return on net operating assets when the control variable of firm size was included.

Managerial Implications

The importance of an optimal capital structure is that it helps to maximize the firm owner's wealth. One of the key factors of an optimal capital structure is the maintenance of an optimal gearing ratio in the organization. Even the owners in the organization can invest more equity capital in the organization, while debt capital can also contribute to their wealth maximization. The expectation of the company is to increase the percentage of return on the capital invested by its owners along with mitigating the agency cost between managers and owners.

It has been revealed by this study's results that management may have been missing wealth maximization opportunities due to the neglect of these factors. Therefore, it can be concluded from the research findings that manufacturing companies in Sri Lanka may have to be very aware of their capital structures. If management pays due attention to its company capital structure, it can contribute both to society and to the economy of the country. Consideration of the optimal capital structure in the manufacturing sector in these time series may help performances in the manufacturing sector to develop, and in this way contribute to the development of the country's economy.

Limitations and Research Recommendations

The sample was based on the observations of listed manufacturing companies in Sri Lanka; thus, the results may not be applicable to other business sectors. Furthermore, the control variable of firm size was excluded from the regression analysis because of the non-significant results, which suggests that firm size was not a control factor for financial leverage and firm performance. Therefore, this study's results for these variables may be less reliable for the large global segment.

There are a number of avenues for future research. Alternative research methods could be used, such as questionnaires, interviews, case studies, and experimental designs to further explore the relationship between financial leverage and firm performance. This exploration could help to obtain deepen insight into the

relationship between financial leverage and firm performance. Further research is needed to examine other relevant factors which may influence financial leverage and firm performance.

References

- AIVAZIAN, V.A., GE, Y. and QIU, J., 2005. The impact of leverage on firm investment: Canadian evidence, *Journal of corporate finance*, 11(1-2), pp. 277-291.
- Al-Duais, F., 2016. An Empirical Study on Capital Structure and Corporate Performance of Chinese Listed Companies, *Journal of Commerce and Accounting Research*, 5 (3), pp. 18-21.
- ARAFAT, M. Y., WAROKKA, A., BUCHDADI, A. D., and SUHERMAN., 2013. Banking efficiency and performance: a test of banking characteristics in an emerging market, *Journal for Global Business Advancement*, 6(1), pp. 13-23.
- ARUNA, D.C. and WAROKKA, A., 2013. Systematic risk and accounting determinants: a new perspective from an emerging market, *Journal for Global Business Advancement*, 6(1), pp. 24-37.
- BERGER, A.N. and PATTI, D.E.B., 2006. Capital structure and firm performance: A new approach to testing agency theory and an application to the banking industry, *Journal of Banking & Finance*, 30(4), pp. 1065-1102.
- BIRT, J. L., BILSON, C. M., SMITH, T., and WHALEY, R. E., 2006. Ownership, competition, and financial disclosure, *Australian Journal of Management*, 31(2), pp. 235-263.
- DEVOS, E., DHILLON, U., JAGANNATHAN, M. and KRISHNAMURTHY, S., 2012. Why are firms unlevered? *Journal of corporate finance*, 18(3), pp 664-682.
- FRANK M.Z. and GOYAL V.K., 2003. Testing the pecking order theory of capital structure, *Journal of financial economics*, 67(2), pp. 217-248.
- FOSU, S., 2013. Capital structure, product market competition and firm performance: Evidence from South Africa, *The quarterly review of economics and finance*, 53(2), pp.140-151.
- GHOSE, B. and Kabra, K.C., 2016. What determines firms' zero-leverage policy in India? *Managerial Finance*, 42(12), pp. 1138-1158.

- GONZALEZ, V. M., 2012. Leverage and corporate performance: International Evidence, *International Review of Economics and Finance*, pp. 169-184.
- HUSSAN J. MD., 2016. Impact of Leverage on Risk of the Companies, *Journal of Civil & Legal Sciences*, 5(4), pp. 1 -3.
- JENSEN, M.C., 1986. Agency costs of free cash flow, corporate finance and takeovers, *American Economic Review*, 76(2), pp. 323-339.
- JENSEN, M.C. and MECKLING, W., 1976. Theory of the firm: Managerial behavior, agency costs, and capital structure, *Journal of Financial Economics*, 3, pp. 305-360.
- KIZILDAG, M. and OZDEMIR, O., 2017. Underlying factors of ups and downs in financial leverage overtime, *Tourism Economics*, 23(6), pp.1321-1342.
- LEE, H. and MOON, G., 2011. The long run equity performance of zero leverage firms, *Managerial Finance*, 37(10), pp. 872-889.
- LEON, J. S. A., 2013. The impact of Capital Structure on Financial Performance of the listed manufacturing firms in Sri Lanka, *Global Journal of Commerce and Management perspective*, 2(5), pp. 56-62.
- LANG, L.E., OFEK, E. and STULZ, R., 1996. Leverage, investment and firm growth, *Journal of Financial Economics* 40, pp. 3-29.
- MALSHE, A. and AGARWAL, M.K., 2015. From finance to marketing: The impact of financial leverage on customer satisfaction, *Journal of Marketing*, 79(5), pp.21-38.
- MORAIS, F., SERRASQUEIRO, Z. and RAMALHO, J.J., 2019. The zero-leverage phenomenon in European listed firms: A financing decision or an imposition of the financial market? *BRQ Business Research Quarterly*, pp.1-23.
- MYERS, S.C., 1977. The determinants of corporate borrowing, *Journal of Financial Economics* 5, pp. 147-175.
- MYERS, S.C., 2001. Capital Structure, *Journal of Economic Perspectives*, 15(2), pp. 81-102.
- SAFIEDDINE, A. and TITMAN, S., 1999. Leverage and corporate performance: Evidence from unsuccessful takeovers, *The Journal of Finance*, 54(2), pp. 547-580.

- SCHOUBBEN, F. and HULLE, V. C., 2011. Stock listing and financial flexibility, *Journal of Business Research*, 64(5), pp. 483-489.
- SEO, K., 2018. Excessive leverage and firm performance in competitive casino markets, *Tourism and Hospitality Research*, 18(4), pp.498-504.
- SINGH, M. and FAIRCLOTH, S., 2005. The impact of corporate debt on long term investment and firm performance, *Applied Economics*, 37(8), pp. 875-883.
- SUN, J., KENT, P., QI, B. and WANG, J., 2019. CFO Demographic Characteristics and Fraudulent Financial Reporting in China, *Accounting and Finance*, 59(4), pp. 2705–2734.
- WEILL, L., 2008. Leverage and corporate performance: does institutional environment matter? *Small Business Economics*, 30(3), pp. 251-265.