

Factors for Capital Structure towards Firm Performance: Evidence from Listed Manufacturing Firms in East African Countries

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Abstract: *The study aimed to investigate the determinants of capital structure in relation to the performance of publicly listed manufacturing companies in East African nations. Panel data analysis was employed to achieve the research objectives. Secondary data were collected from East African manufacturing firms listed on the stock exchange, including Tanzania Breweries Limited, Tanzania Cigarette Company, British and America Tobacco, and East Africa Breweries Limited, spanning the years 2012 to 2021. Data analysis techniques such as multiple regression and the Pearson correlation method were applied. The findings indicated that several factors, including liquidity, asset tangibility, and growth prospects, had a positive impact on financial leverage, while firm size negatively affected capital structure. Furthermore, the study revealed a positive association between equity capital and financial performance, contrasting with the negative relationship between debt capital and financial performance. In conclusion, the study demonstrated that growth opportunities, liquidity, and asset tangibility significantly influenced capital structure in the context of financial performance. Conversely, debt capital exerted a detrimental effect on a firm's financial performance, while equity capital had a positive influence.*

Keyword: Capital Structure, Firm Performance and Manufacturing Firms

1. Introduction

The financial composition and capital structure of a company are critical for informed decision - making and financial performance enhancement (Olusola et al., 2022). Capital structure represents the mix of debt, equity, and hybrid securities a company uses to fund its operations (Saad, 2010). Proper capital structure decisions are essential for profitability and performance improvement, influenced by factors like industry type and market conditions.

The relationship between capital structure and a company's performance has been extensively studied. It can impact capital costs and overall value (Desai & Dharmapala, 2007). Achieving an optimal capital mix is essential, but it's a challenging task due to its complexity (Boshnak, Alsharif & Alharthi, 2023). Regions like East Africa face unique challenges, making capital structure decisions even more crucial (Osagie & Enadeghe, 2022).

Various studies on the link between performance and capital structure has yielded diverse results, underlining the need for further study (Zeitun&Tian, 2007; Onaolapo and Kajola, 2010; Martis, 2013; Olusola et al., 2022). East African manufacturing companies faced challenges during the recent pandemic, emphasizing the importance of understanding capital structure's impact (Walakira, 2021; Deloitte, 2020). In this context, this study examined factors for capital structure towards firm performance of listed manufacturing firms in East African Countries.

2. Study Methodology

In this study, panel data analysis was employed, enabling the observation of various phenomena over time. Unlike purely time series or cross - sectional studies, this approach offered a holistic perspective. The study gathered secondary data from East African listed manufacturing firms like Tanzania Breweries Limited, Tanzania Cigarette Company, British and America Tobacco, and East Africa Breweries Limited, encompassing annual financial statements from 2012 to 2021. To analyze the data, multiple regression and the Pearson correlation method were utilized as key analytical tools.

3. Study Finding and Discussion

3.1 Correlation Analysis

The primary aim of conducting a correlation analysis is to assess the persistence of the relationship between independent and dependent variables following a regression analysis. The correlation coefficient serves as a tool for illustrating the movement of a single variable or a combination of factors, ranging from a strong positive correlation to a negative one. Conversely, the Pearson correlation is employed to ascertain the associations between independent variables and a firm's capital structure, encompassing factors such as growth opportunities, firm size, tangibility, and liquidity. Furthermore, the statistical significance of the correlation is considered to gauge its reliability. The relationship between various variables from 2012 to 2021 is presented in Table 3.1 below.

Table 3.1: Pearson Correlation

		Pearson Correlation				
		Financial Leverage	Growth Opportunities	Firm Size	Tangibility	Current Ratio
Financial Leverage	Pearson correlation	1	.020	.143**	.279**	-.328**
	Sig. (2 - tailed)		.041	.000	.001	.000
	N	40	40	40	40	40
Growth opportunities	Pearson Correlation	.020	1	.080	.045	-.081
	Sig. (2 - tailed)	.041		.571	.107	.497
	N	40	40	40	40	40
Firm size	Pearson Correlation	.143**	.080	1	.291	-.055**
	Sig. (2 - tailed)	.000	.571		.000	.000
	N	40	40	40	40	184
Tangibility	Pearson Correlation	.279**	.045	.291	1	-.202**
	Sig. (2 - tailed)	.001	.107	.000		.001
	N	40	40	40	40	40
Current Ratio	Pearson Correlation	-.328**	-.081	-.055**	-.202**	1
	Sig. (2 - tailed)	.000	.497	.000	.001	
	N	40	40	40	40	40

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

Source: Field Data (2023)

The results in Table 3.1 indicate that financial leverage is negatively correlated with liquidity at coefficient value of -0.328. On the other hand, there was a positive correlation between the firm size, tangibility, and growth opportunities as indicated by the Pearson correlation values of 0.020, 0.143, and 0.279.

The increase in liquidity of listed firms in East Africa would result in a decrease in their financial leverage. On the other hand, an increase in their growth opportunities, firm size and the tangibility of their assets would boost their financial leverage. The highest correlation was found between liquidity and leverage at 0.328.

3.2 Regression Coefficient Results

Table 3.2: Regression Coefficient Results

		Coefficients ^a				
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	.625	.112		6.622	.000
	Growth opportunities	.166	.054	.133	5.429	.013
	Firm size	.155	.069	.128	4.205	.065
	Tangibility	.102	.086	.201	6.012	.030
	Liquidity	-.232	.031	-.188	-3.626	.000

a. Dependent Variable: Return on Asset (ROA)

Source: Field Data (2023)

The findings presented in Table 3.2 reveal the beta coefficients for the factors: growth opportunities, tangibility, and liquidity, all of which were statistically significant (p < .01). Specifically, the beta values were .133, .201, and -.188, respectively. These results suggest that the primary driver among these independent variables was tangibility, indicating a substantial and positive impact. Interestingly, liquidity, as measured by the current ratio, exhibited a negative influence, albeit statistically significant.

Firm size, on the other hand, displayed an insignificant beta value (p > 0.05), thus rejecting the hypothesis that it has a noteworthy influence on a firm's capital structure. Furthermore, growth opportunities and tangibility both exhibited significant values (p < .01), supporting the hypotheses that they indeed play significant roles in influencing a firm's capital structure. Consequently, the overall results suggest a positive correlation between the independent and dependent variables, with the exception of liquidity.

3.3 Factors for Capital Structure towards Firm Performance

The study's findings, detailed in Tables 3.1 and 3.2, showcase the associations and regression coefficients pertaining to financial leverage and its connection to multiple factors influencing a company's capital structure, such as size, liquidity, growth prospects, and asset tangibility.

3.3.1 Growth Opportunities

Table 3.2 illustrates the correlation between capital structure and financial leverage. It highlights the statistical significance of 0.014 in relation to growth opportunities, which were assessed through asset growth. This suggests that a company's financial leverage is indeed influenced by its growth prospects. Specifically, the presence of growth opportunities in a manufacturing company can have a positive impact on its financial leverage.

These findings align with the study conducted by Chen (2004), which also indicated that the presence of growth opportunities can enhance a company's financial leverage by

enabling them to access loans from the market. However, it is worth noting that a study by Fiseha (2010) in Ethiopia found contrasting results, revealing that the financial leverage of commercial banks was adversely affected by the presence of growth opportunities.

3.3.2 Firm Size

Table 3.2 displays the relationship between the size of a manufacturing company and its financial leverage. The coefficient of 0.066 suggests that there is no statistically significant correlation between these two variables. Moreover, the study indicates that the size of a manufacturing company does not exert any influence on its financial leverage, as evidenced by the relatively small values for TCC and TBL in comparison to BAT and EABL.

The findings are consistent with study by Tang and Jang (2007) which also discovered a negative relationship between company size and financial leverage. However, a study by Abbas (2016) in Norway, failed to establish a clear link between firm size and capital structure. These results contrast with other studies that have found a positive correlation between a company's financial leverage and its size. For instance, Kumar (2014) showed that larger firms are more likely to secure capital from banks, and similar positive correlations have been reported in studies by Huang and Song (2005) and Fiseha (2010).

3.3.3 Tangibility

In Table 3.2, it becomes evident that there exists a positive correlation between financial leverage and the assets of publicly listed companies. The findings are underpinned by a significant p - value of 0.04, signifying the statistical significance of the relationship between financial leverage and listed firms' assets. Furthermore, the study identifies that a higher proportion of fixed assets in manufacturing companies, relative to their total assets, enhances their prospects of securing capital from the market.

These findings align with both agency and trade - off theories, both of which contend that financial leverage can augment a company's asset tangibility. Notably, similar results were observed in previous studies conducted by Xiao and Zoo (2006) as well as Wirjanto and Qian (2007). In addition, Sivathaasan and Sangeetha (2013) reported in their study that a greater share of tangible assets within a company is positively associated with higher leverage.

3.2.4 Liquidity

Table 3.2 illustrates a clear positive correlation between a company's liquidity and its financial leverage. This connection stems from the fact that a company boasting a substantial liquidity reserve possesses a distinct advantage when it comes to obtaining capital from financial institutions or the market, as it can meet its debt obligations promptly.

According to the pecking order theory, a company with a robust liquidity position can readily secure capital from the market, primarily due to its ability to promptly satisfy its debt obligations. Conversely, the tradeoff theory posits that highly liquid firms may be more susceptible to long - term financial challenges. These findings resonate with prior study, such as studies conducted by Kumar (2014) and Ali

and Zahida (2013), which also observed a significant relationship between a firm's financial leverage and its liquidity status.

4. Conclusion and Recommendations

The study analyzed factors affecting a company's capital structure, especially its financial leverage, using correlation and regression analyses. It found a negative correlation between liquidity and financial leverage, suggesting that higher liquidity tends to lead to lower financial leverage, in line with the pecking order theory. On the other hand, growth opportunities, firm size, and asset tangibility showed positive correlations with financial leverage, indicating that firms with promising growth prospects, larger sizes, and more tangible assets are more likely to secure capital from the market. These findings underscore the complex nature of capital structure decisions in East Africa and emphasize the need to consider these factors for improved financial performance and capital access. However, further study and localized analysis are essential for a deeper understanding of these relationships in the region.

References

- [1] Boshnak, H. A., Alsharif, M. & Alharthi, M. (2023). Corporate Governance Mechanisms and Firm Performance in Saudi Arabia Before and During the COVID - 19 Outbreak. *Cogent Business & Management*, 10 (1), 1 - 24.
- [2] Chen, J. J. (2004). Determinants of Capital Structure of Chinese - Listed Companies. *Journal of Business Research*, 57 (12), 1341 - 1351.
- [3] Desai, M. A. & Dharmapala, D. (2007). Taxation and Corporate Governance: An Economic Approach. Retrieved from
- [4] <https://ssrn.com/abstract=983563> or <http://dx.doi.org/10.2139/ssrn.983563>
- [5] Evbayiro - Osagie, E. I., & Enadeghe, I. B. (2022). Capital Structure and Performance of Non - Financial Firms in Sub - Sahara Africa. *International Journal of Finance Research*, 3 (1), 49 - 62.
- [6] Huang, G. & Song, F. M. (2006). The Determinants of Capital Structure: Evidence from China. *China Economic Review*, 17 (1), 14 - 36.
- [7] Martis, R. N. (2013). Capital Structure and Firm's Financial Performance - An Empirical Analysis of S&P500. Master Of Finance Thesis. Van Tilburg University.
- [8] Olusola, B. E., Mengze, H., Chimezie, M. E., & Chinedum, A. P. (2022). The Impact of Capital Structure on Firm Performance - Evidence from Large Companies in Hong Kong Stock Exchange. *Open Journal of Business and Management*, 10 (03), 1332 - 1361.
- [9] Olusola, B. E., Mengze, H., Chimezie, M. E., & Chinedum, A. P. (2022). The Impact of Capital Structure on Firm Performance - Evidence from Large Companies in Hong Kong Stock Exchange. *Open Journal of Business and Management*, 10 (03), 1332 - 1361.
- [10] Onaolapo, A & Kajola, S. (2010). Capital Structure and Firm Performance: Evidence from Nigeria. *European*

Journal of Economics, Finance and Administrative Sciences, 1 (3), 1 - 15.

- [11] Saad, N. M. (2010). Corporate Governance Compliance and the effect to capital structure in Malaysia. *International Journal of Economic & Finance*, 2 (1) 105 - 114.
- [12] Tang, C. & Jang, S. (2007). Revisit to the Determinants of Capital Structure: A Comparison between Lodging Firms and Software Firms. *International Journal of Hospitality Management*, 26, 175 - 187.
- [13] Walakira, G. (2021). Impact of COVID - 19 on Light Manufacturing in the East African Community Impact of COVID - 19 on Light Manufacturing in the East African Community. *Journal of Finance*, 39 (3), 575 - 592.
- [14] Zeitun, R. & Tian, G. (2007). Capital Structure and Corporate Performance: Evidence from Jordan. *The Australian Accounting Business & Finance Journal*, 1, 40 - 61.