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CAPITAL STRUCTURE EFFECTS ON FIRM PERFORMANCE: EVIDENCE FROM PANEL DATA IN PAKISTAN

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Capital structure, firm performance, long-term debt, short-term debt, return on assets, return on equity

Abstract
This study examines the influence of capital structure on company's performance and focuses on return on assets (ROA) and return on equity (ROE), while considering control variables such as total assets, Taxes, and firm size. Using data from 52 companies traded during the period from 2015 to 2023 on the Pakistan Stock Exchange, the research employs methodologies including general method of moments (GMM) and correlation analysis. The analysis reveals significant positive relationships between various components including long-term debt, and short-term debt with both ROA and ROE. Control variables such as total assets, Taxes, and firm size also exhibit significant impacts on both ROA and ROE. These findings give useful information for financial managers, policymakers, and investors, stressing the need of optimizing decisions to improve long-term operating success in the company context.

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INTRODUCTION

1.1 Background:

The financial structure of a company represents the aggregate of various resources of financing employed to meet its operational and investment requirements. It is an important part of financial management that significantly influences a performance and cost of the company The aims of this study is to assess the influence of capital structure on business performance, by focusing on the relationship between non-current liabilities or current liabilities with key financial indicators such as ROA (assets profitability ratio) and ROE (equity return ratio). Additionally, we consider control variables like total assets, firm size and taxes to provide a comprehensive analysis.

Capital structure decisions involve choosing an optimal balance between equity and debt to fund a company's activities. These choices are made with the intention of creating an ideal capital structure that minimizes capital costs and optimizes the firm's value. Long-term debt, often used for financing capital-intensive projects, contrasts with short-term debt, which addresses more immediate funding needs. The frequently used performance metrics return on equity (ROE) and return on assets (ROA) evaluate a company's capacity to make money from its equity and assets, respectively. Gaining knowledge about how various debt arrangements affect these important metrics can help evaluate how well a company's financial strategy are working. In addition to debt-related variables, control elements such as total assets, size, and Taxes play a crucial role in shaping a firm's performance. Total assets signify the scale of operations, while firm size captures the magnitude of a company in the market. Margin taxes may have an impact on capital structure choices as well as overall performance. This study explores the complex relationship between capital structure components and business performance in an effort to add to the body of knowledge already in existence. considering both financial leverage and operational efficiency. The evaluation is suggested practical implications for financial managers, policymakers, and investors in optimizing capital structure decisions for enhanced firm performance in dynamic business environments.

Graham & Harvey (2001) Capital model trading theory that firms face a delicate balancing act in determining the optimal combination of debt and equity to achieve its performance and value. This theory revolves around the trade-off between relevant benefits and costs associated with leveraging, acknowledging that there are advantages to using debt as well as potential drawbacks. In essence, the Trade-Off Theory emphasizes the need for firms to consider the balance between the tax benefit of debt and the associated financial and organizational costs. Achieving a good investment process involves finding the right balance that increases the benefits of leveraging while mitigating the potential drawbacks, ultimately contributing to enhanced firm performance and value.

Posits that companies try to find the best balance between the tax benefit of debt and the associated costs of financial distress. - Long-term debt, providing tax shields, is expected to positively impact Taxes (ROA and ROE). - Short-term debt, offering flexibility, may positively influence both short-term and long-term performance. Examining the connection between capital structure and important performance metrics like return on equity (ROE) and return on assets (ROA) is the goal of this research. Next, ascertain the relationship's direction, such as whether it is positive or negative. Analyze how equity and debt affect the financial results of food and personal care products, pharmaceuticals and cement firms of Pakistan stock exchange. How does the company's capital affect its overall financial performance? What is the relationship between the overall ratios of a corporation and return on assets?

This research holds significance in its examination of how a company's capital structure is made up, with an emphasis on long- and short-term debt, influences its performance as determined by ROE and ROA. Through the analysis of these relationships alongside crucial control variables such as total assets, Taxes, and firm size, it provides valuable insights for financial managers, policymakers, and investors. Ultimately, this study contributes to the field of corporate finance by offering actionable insights for stakeholders seeking

to optimize firm value in dynamic market environments.

1- LITERATURE REVIEW:

In the realm of corporate finance, a great deal of study has been done on the influence of capital structure on corporate performance. Researchers have investigated various aspects of capital structure, examining the relationships among different debt components, financial performance metrics, and control variables. This literature review provides an overview of key findings and insights from relevant studies. In their study, Myers (1984) and Modigliani and Miller (1963) established the theoretical foundation for understanding the compromise between debt's tax benefits and the charges associated with monetary difficulty. Anh Huu NGUYEN and Hieu Thanh NGUYEN (2020) carried out research on the influence of capital structure at the overall effectiveness of non-financial corporations indexed at the Vietnam stock market. Analyzing a period over 2013 to 2018 with a sample of 488 listed companies.

The research revealed a negatively statistically significant impact of capital shape on business success. IMSAR Rohtak, Haryana (2018) explored the debt and equity choices at the overall effectiveness of indexed businesses in India, finding significant inverse effects of both variables (LDTA & SDTA) on return on assets (ROA). Additionally, return on equity (ROE) and earnings per share (EPS) were significantly positively impacted by LDLTA and SDTA, indicating a strong correlation between capital structure and business success. Ye Jianmu, Amraoui Mouna, Hapzi Ali, and Shinta Amalina Hazrati Havidz (2017) concluded in their study that a significant debt ratio (DR) negatively affected return on asset (ROA). Empirical research by Rajan and Zingales (1995) and Frank and Goyal (2009) explored a non-linear relationship among leverage and ROA, suggesting that while moderate levels of debt might enhance ROA through tax shields, excessive debt can lead to financial distress and negatively impact profitability. Berger and Bonaccorsi di Patti (2006) and Antoniou, Guney, and Paudyal (2008) argue that large firms benefit from scale economies and achieve cost savings through debt financing, leading to improved ROA and ROE. Riaz,at el 2022) explains regarding antecedents of capital structure and firm performance: evidence from G-7 countries. And another article also explains Riaz, at el, (2022). A comparative analysis of capital structure of G-20 fi rms on regional basis.

Contradictory findings were observed in other studies. Ibrahim (2009) Booth et al. (2001), Simerly and Li (2000), reported weak/no relationships among the capitalization structure levels of leverage along with the performance of the business. Likewise, Holz (2002) also demonstrated a favorable correlation between company effectiveness and capital structure

Conversely, Hadlock & James (2002) identified a favorable relationship between firm success and capital structure. They noticed that businesses with substantial profitability typically use more debt. The total assets of a company are a major factor in determining its capital structure. Studies by Harris and Raviv (1991) and Rajan and Zingales (1995) found that larger businesses have easier access to the financing markets and could make use of debt to finance their growth, positively impacting company's performance Gleason et al. (2000) discovered that the capital structure of companies in European nations is strongly and negatively correlated with their profit margin and return on assets (ROA) metrics. The literature, in summary, emphasizes the complex relationship between a company's capital structure and overall performance, highlighting the importance of thoroughly examining different components of debt and the impact of control variables. Current studies seek to expand on our knowledge of the complex relationship that exists between capital structure choices and the performance of the resulting company.

2.1 Hypothesis:

H1(a): There is a significant positive relationship between capital structure, specifically short-term debt, and return on assets (ROA).

H1(b): There is a significant positive relationship between capital structure, specifically long-term debt, and return on assets (ROA).

H2(a): There is a significant positive relationship between capital structure, specifically short-term debt, and return on equity (ROE).

H2(b): There is a significant positive relationship between capital structure, specifically long-term debt, and return on equity (ROE)
H3: There is a significant positive relationship between total assets and both ROA and ROE.
H4: There is a significant negative relationship between taxes and both ROA and ROE.
H5: There is a significant positive relationship between firm size and both ROA and ROE.

3- RESEARCH METHODOLOGY:

3.1 Data Collection:

In our research, we collect secondary data to find out the influence of capital structure on the performance of 52 non-financial corporates of Pakistan Stock Exchange. Secondary data, in this context, refers to information that has previously been gathered and analyzed by other researchers or entities (Kothari, 2004). We obtain financial data from reputable sources such as annual reports, financial statements, and databases related to the firm of our selected sectors. The data collection covered the years 2015 to 2023.

Sectors	No of companies
Food and personal care product	20
Pharmaceutical	10
Cement	22
Total	52

The research model is grounded in financial theories, particularly trade-off hypothesis, to evaluate the relationships among debt and equity components and business performance.

This research model provides a structured framework for investigating the effect of capital structure on firm effectiveness, incorporating relevant theoretical foundations and hypotheses to guide empirical analysis. To create an equation for the influence of capital structure on firm effectiveness, considering long-term debt (LTD), short-term debt (STD) as independent variables (IVs), with return on equity (ROE) and return on assets (ROA) acting as dependent variables (DVs) while incorporating control variables such as total assets (TA), firm size (FS), and Taxes you can use a model of multiple linear regression. The general form of the equation is:

$$ROA_{it} = \beta 0_{it} + \beta 1 \cdot LTD_{it} + \beta 2 \cdot STD_{it} + \beta 3 \cdot TA_{it} + \beta 4 \cdot Size_{it} + \beta 5 \cdot Taxes_{it} + \epsilon_{it} \quad (1)$$

$$ROE_{it} = \beta 0_{it} + \beta 1 \cdot LTD_{it} + \beta 2 \cdot STD_{it} + \beta 3 \cdot TA_{it} + \beta 4 \cdot Size_{it} + \beta 5 \cdot Taxes_{it} + \epsilon_{it} \quad (2)$$

Where:
Return on Assets, (ROA)
Return on Equity, (ROE)
The intercept term, denoted as β0, signifies the anticipated value of ROA in the event that all independent and control variables reach zero.
The coefficients for the independent variables LTD and STD are denoted by β1, β2, respectively.
The coefficients for the control variables taxes, FS, and TA are B3,β4, β5.
The associated independent and control variables are LTD, STD, TA, FS, and taxes.
The error term is ϵ
i: the total number of businesses
t: the total number of observations for every business

3.2 Variables:

Table-1: Details of variables

Variables	Variables name	Measurement
LTD	Long-term debt	Long-term debt/ Total assets
STD	Short-term debt	Short term debt/ Total assets
ROA	Return on assets	Net income / Total Assets
ROE	Return on equity	Net income / Shareholders equity
TA	Total assets	Current Assets + fixed Assets
Size	Firm Size	Total revenue
Taxes	Taxes	Tax expense/ Pre-tax income

3.2.1 Independent Variables (IVs):

- **Long-Term Debt: -** Represents the firm's strategic use of debt for long-term investment. - The conceptual link suggests that Both ROA and ROE are positively impact by long-term debt through tax advantages and enhanced leverage.

- **Short-Term Debt: -** Reflects the entity's ability to manage immediate financial obligations. The conceptual link suggests that ROA and ROE are positively impacted by short-term debt, providing flexibility and liquidity.

3.2.2Dependent Variables (DVs):

- **ROA (Return on Assets):-** Estimate the efficiency of asset utilization in generating profits. - The conceptual link suggests that optimal capital structure positively influences ROA through effective financing choices.

- **ROE (Return on Equity):** Assesses the equity return to shareholders. The conceptual link indicates that capital structure decisions positively impact ROE through financial leverage and alignment of interests.

3.2.3Control Variables:

- **Total Assets**: Total assets comprise both current and fixed assets. According to the conceptual link, total assets have a positive moderating influence on the impact of debt on a company's perform e.
- **Firm Size: -** total revenue.

- **Taxes : -** It include both direct and indirect taxes used to fund government activities

4- DATA ANALYSIS:

We use ordinary least square or GMM techniques for panel data modeling. The model known as pooled ordinary least squares (OLS) assumes that there are no distinct characteristics across different sections. However, relying on this model can result in biased estimation when certain independent variables are associated with the error term, indicating that they are endogenous. The GMM techniques is recommended as a solution to these problems. GMM has been praised for its efficacious handling of endogeneity and autocorrelation issues. Scholars such as Ullah et al. (2021) and Souza and Gomes (2015) have supported the adoption of GMM due to its robustness in addressing these econometric challenges.

In summary, considering the limitations of the pooled OLS model, researchers have turned to GMM as a more reliable method for mitigating issues related to endogeneity and other complexities to investigate the influence of debt and equity on 52 firms that are traded on the Pakistan Stock Exchange in terms of firm performance.

4.1 GLS Regression results:

Table: 02 ROA model GLS regression results:

Variables	coefficient	Std-error	P-Value
LTD	0.098	0.342	0.003
STD	0.137	0.344	0.049

TOTAL_ASSETS	5.186	2.820	0.006
TAXES	0.006	0.003	0.000
FIRM_SIZE	3.601	2.616	0.008
C	5.777	2.125	0.006

LTD (Long-Term Debt): The return on assets rises by 0.098 units. For each unit that long-term debt rises. At the 0.05 level, this association is statistically significant (p = 0.003).

STD (Short-Term Debt): The return on assets (ROA) rises by 0.137 units for each unit short-term debt rises. At the 0.05 level, this connection is statistically significant (p = 0.049).

Total Assets: When all other factors are held constant, a rise in total assets is correlated with an increase in ROA, according to the positive coefficient of TOTAL_ASSETS (5.186).

Taxes: For each unit of tax increase, the ROA increases by 0.006 units. indicating that higher Taxes is associated with higher ROA, this relationship is highly statistically significant (p = 0.000).

Firm Size: The ROA rises by 3.601 units for each unit rise in income. At the 0.05 level, this connection is statistically significant (p = 0.008).

C (Intercept): In the regression equation, this stands for the constant term. The anticipated value of ROA is 5.777 when all independent variables are zero. At the 0.05 level, this connection is statistically important (p = 0.006).

Overall, the regression model suggests that factors such as total assets, short-term and long-term, Taxes, and firm size significantly influence ROA. However, it's important to remember that correlation does not imply causation, and other unaccounted factors might also play a role in determining ROA.

Table -3: ROE model GLS regression results

Variables	coefficient	Std. Error	P-Value
LTD	0.174	1.984	0.031
STD	0.309	1.997	0.008
TOTAL ASSETS	2.535	1.635	0.002
TAXES	0.011	0.021	0.009
FIRM SIZE	6.226	1.511	0.000
C	11.127	12.311	0.366

Based on the GLS regression results of the Return on Equity (ROE) model:

Long-Term Debt (LTD): Considering the coefficient (0.174), there is a minor effective correlation in between long-term debt and ROE. At the 0.05 level, this connection is statistically significant (p = 0.031).

Short-Term Debt (STD): Considering the coefficient (0.309), there appears that the relationship between short-term debt and ROE is to be a minor positive. At the 0.05 level, this connection is statistically significant (p = 0.008).

Total Assets (TA): Keeping other variables equal, the correlation (2.535) indicates that a rise in total assets is correlated with a rise in return on equity (ROE). At the 0.05 level, this connection is significant statistically (p = 0.002).

Taxes: According to the coefficient (0.011), there is a slight increase in ROE for every unit raised in taxes. This relationship is statistically significant at the 0.05 level (p = 0.009).

Firm Size: According to the coefficient (6.226), larger companies often have much greater ROE. This relationship is highly statistically significant (p = 0.000).

Intercept (C): The constant term in the regression equation shows the anticipated ROE value. when all independent variables are zero. In this case, the intercept is 11.127. However, At the 0.05 level, it is not statistically significant (p = 0.366).

Overall, the regression model suggests that Taxes, total assets, firm size, and total debt over time are significant predictors of ROE. Larger companies typically have greater ROE, and increases in total assets, total debt, Taxes, and debt components are associated with increases in ROE.

4.2-Summary Statistics:

Table-4: Descriptive Statistics of ROA:

	Obs	Mean	median	Maximum	Minimum	Std. Dev
ROA	468	4.9641	4.7399	76.5477	19.7382	15.1192
LTD	468	22.0650	17.5544	37.2999	-329.2006	18.8112
STD	468	39.5878	30.1303	16.31674	17.7997	26.7779
TOTAL ASSETS	468	3.7434	2.7321	99.2848	95.0912	25.2970
TAXES	468	33.0806	31.3711	10.2437	-24.70167	18.9324
FIRM SIZE	468	19.0633	13.1115	15.6291	-633.3088	13.9103

ROA (Return on Assets): Return on Assets is a metric that assesses how successful a company can make use of its assets. With a median value of 4.74%, the return on assets (ROA) is roughly 4.96% on average. There is a minimum of 19.74% and a maximum of 76.55% for the ROA. The data are fairly distributed, as indicated by the standard deviation of 15.12%.

LTD (Long-Term Debt): Long-term debt is defined as debts with maturities longer than a year. The long-term debt to average ratio is at 22.07. with a median value of 17.55. There seems to be an outlier with a minimum value of -329.20. standard deviation of 18.81.

STD (Short term debt): The short-term debt median value is 30.13., and the average is about 39.59. With a standard deviation of 26.78, the standard deviation varies from a low of 17.80 to a maximum of 16.32.

TOTAL ASSETS: A company's total assets are all the assets that it owns or controls. The median total asset worth is 2.73, and the average is roughly 3.74. With a standard deviation of 25.30, There is a minimum of 95.09 and a maximum of 99.28 in the total assets.

TAXES: Taxes are a measure of a business's profitability in relation to its equity, assets, and income. Taxes have a median value of 31.37 and an average of roughly 33.08. Taxes ranges from -24.70 to 10.24, with a standard deviation of 18.93.

FIRM SIZE: The average firm size is approximately 19.06, with a median value of 13.11. However, there seems to be an outlier with a minimal value of -633.31, with a standard deviation of 13.91.

These statistics provide insights into the central tendency, dispersion, and distribution of each variable in the dataset.

Table -5: Descriptive Statistics of ROE:

	Obs.	Mean	median	Maximum	Minimum	Std. Dev
ROE	468	14.4483	9.884992	15.0522	-47.5933	90.9595
LTD	468	19.0633	13.3111	15.0629	-63.3088	13.9103
STD	468	33.0806	31.3711	15.2437	-24.7016	18.9324
TOTAL ASSETS	468	37.4356	27.3219	99.2848	91.2322	25.2970
TAXES	468	22.0650	7.55446	37.2958	-39.2006	18.8112
FIRM SIZE	468	39.5878	35.1303	16.3167	7.7997	26.7779

One measure for assessing a company's profitability is return on equity (ROE). It shows the amount of money a company produces from the capital that its shareholders have invested. The average ROE is 14.45%, with a median value of 9.88%. The huge standard deviation of 90.96 suggests that the data are highly dispersed. Additionally, there seems to be a negative outlier with a minimum value of -47.59. The average long-term debt is 19.06, with a median value of 13.31. There seems to be a negative outlier with a minimum value of -63.31 with 13.91 as the standard deviation. The mean short term debt is 33.08, with a median value of 31.37 and -24.70 is the least value and 15.24 is the greatest, with the standard deviation of 18.93. The average total assets is 37.44, with a median value of 27.32. The total assets have a standard deviation of 25.30 and range from 91.23 to 99.28 at their highest point. The mean taxes amount 22.07, with a median value of 7.55. There seems to be a negative outlier with a minimum value of -39.20 with 18.81 standard deviation. The mean of firm size is 39.59, with a median value of 35.13. The minimum and maximum firm sizes are 7.80 and 16.32, respectively. The data is somewhat spread out, with a standard deviation of 26.78.

4.3-Matrix Correlation:

Table -6: Matrix correlation of ROA:

	ROA	TOTAL ASSETS	STD	PROFIT-ABILITY	LTD	FIRM SIZE
ROA	1					
TOTAL ASSETS	0.0621	1				
STD	0.0509	0.0066	1			
TAXES	0.0462	0.0595	0.0242	1		
LTD	0.0113	0.0225	0.0167	0.0267	1	
FIRM SIZE	0.0553	0.0526	0.0112	0.0462	0.0019	1

Researchers frequently utilize matrix correlation analysis to assess the interrelationships among independent variables. This approach, adopted by scholars like Midi et al. (2010), Yoo et al. (2014), and Aras et al. (2010), aids in detecting perfect collinearity, a critical assumption in multiple regression analysis emphasized by Wooldridge (2015). According to Cole and Preacher (2014) and Vatcheva et al. (2016), correlation coefficients exceeding 0.80 indicate perfect correlation between independent variables, highlighting potential multicollinearity issues that may compromise the reliability and interpretability of regression findings.

The provided correlation matrix offers insights into the associations between various variables:

ROA (Return on Assets): Positively correlated with Total Assets (0.0621), Taxes (0.0462), and Firm Size (0.0553). and weakly correlated with short-term debt (0.0509), and long-term debt (0.0113).

Total Assets: Weakly positively correlated with ROA (0.0621), Short term debt (0.0066), and Taxes (0.0595).

Short term debt: Weakly directly related with ROA (0.0509) and Taxes (0.0242).

Taxes: Positively correlated with ROA (0.0462), Total Assets (0.0595), Short term debt (0.0242), and Firm Size (0.0462) and weakly correlated with Long-Term Debt (0.0267).

Long-Term Debt: Weakly positively correlated with ROA (0.0113), Total Assets (0.0225), Total Debt (0.0011), and Taxes (0.0267).

Firm Size: Positively correlated with ROA (0.0553), Total Assets (0.0526), Taxes (0.0462).Negatively correlated with Short term debt (0.0112).

Table -7: Matrix correlation of ROE:

	ROE	TOTAL ASSETS	PROFIT-ABILITY	LTD	FIRM SIZE	STD
ROE	1					

TOTAL ASSETS	0.0126	1				
TAXES	0.0261	0.0595	1			
LTD	0.0285	0.0222	0.0267	1		
FIRM SIZE	0.0310	0.0526	0.0466	0.0019	1	
STD	0.0179	0.0066	0.0242	0.0167	0.0111	1

The correlation matrix provided illustrates the associations between different variables:
Return on Equity (ROE): Displays perfect correlation with itself.
Total Assets: Shows weak positive correlation with ROE
Taxes: Indicates very weak positive correlation with ROE and total assets
Long-Term Debt (LTD): Demonstrates moderate positive correlation with ROE, weak positive correlation with total assets, Also, a very weak unfavorable relation with Taxes.
Firm Size: Shows very weak negative correlation with ROE, and Taxes, and very weak direct relationship with total assets.
Short-Term Debt (STD): Reveals weak favorable relationship with ROE and STD, very weak favorable relationship with total assets and Taxes, and weak negative correlation with firm size.
These correlation coefficients provide insights into the magnitude and orientation of the linear relationships among each pair of element, aiding in the analysis and interpretation of their interplay.

4.4 Generalized Method of Moment:
Table-8: GMM of ROA:

Variable	Coefficient	Std.Error	Prob.
ROA(-1)	0.0359	0.0407	0.0381
TOTAL ASSETS	2.1905	4.5506	0.0000
STD	5.6341	24.3870	0.0018
TAXES	0.1953	0.0728	0.0098
LTD	5.6479	24.4003	0.0481
FIRM_SIZE	1.7905	3.8506	0.0000

The Generalized method of moments (GMM) estimation technique is used to estimate parameters in econometric models. In your output, you have coefficients, standard errors, and p-values for each variable estimated using GMM. Here's a detailed description of the result:
we can discern the impact of each variable on the Return on Assets (ROA):
ROA (-1): The lagged value of return on assets (ROA) has a coefficient of 0.0359, with a std. error of 0.0407. The associated probability is 0.0381, indicating a statistically significant relationship.
TOTAL ASSETS: The coefficient for total assets is 2.1905, with a std. error of 4.5506. The probability associated with Total Assets is 0.0000, suggesting a highly significant relationship.
STD (Short term debt): The coefficient for Short term debt is 5.6341, with a std. error of 24.3870. The probability associated with Short term debt is 0.0018, suggesting a statistically significant relationship.
TAXES: The coefficient for Taxes is 0.1953, with a std. error of 0.0728. The associated probability is 0.0098, indicating a statistically substantial relationship.
LTD (Long-Term Debt): The coefficient for Long-Term Debt is 5.6479, with a std. error of 24.4003. The associated probability is 0.0481, suggesting a statistically significant relationship.
FIRM_SIZE: The coefficient for Firm Size is 1.7905, with a std. error of 3.8506. The probability associated with Firm Size is 0.0000, indicating a highly significant relationship.

Overall, the GMM estimation suggests statistically significant relationships between the lagged ROA, Total Assets, current liabilities, Taxes, non-current liabilities, and Firm Size variables with the dependent variable under consideration.

Table-9: GMM of ROE:

Variables	coefficient	Std. Error	P-Value
ROE	0.0412	0.0041	0.0000
TOTAL ASSETS	2.5705	2.2815	0.0265
TAXES	0.2343	0.1126	0.0424
LTD	14.2301	13.6828	0.0017
FIRM SIZE	0.0001	2.4305	0.0000
STD	14.2468	35.6132	0.0267

The Generalized Method of Moments (GMM) estimation for the variables in the table indicates the following relationships:

ROE (Return on Equity): At the 0.05 level, the ROE coefficient is statistically significant, indicating a substantial link between ROE and the other factors.

TOTAL ASSETS: There is a statistically substantial relationship between Total Assets and ROE, as indicated by the coefficient for Total Assets, which is significant at the 0.05 level.

TAXES: The coefficient for Taxes is statistically substantial at the 0.05 level, indicating a significant relationship between Taxes and ROE.

LTD (Long-Term Debt): There may be a substantial correlation between long-term debt and return on equity (ROE), as indicated by the statistically substantial coefficient for long-term debt at the 0.05 level.

FIRM SIZE: There is a statistically substantial relationship between Firm Size and ROE, as directed by the statistically substantial coefficient for Firm Size at the 0.05 level.

STD (Short-term debt): There appears to be a substantial correlation between current liabilities and ROE, as indicated by the statistically substantial coefficient for short-term debt at the 0.05 level.

Overall, the GMM estimation suggests that Total Assets, Taxes, Long-Term Debt, Firm Size, and Standard Deviation have statistically substantial correlation with the Return on Equity (ROE) variable.

5- CONCLUSION AND RECOMMENDATION:

In essence, this research investigated the interplay between elements of the capital structure and the corporate performance, with a particular emphasis on ROE and ROA, It also took control variables such as total assets, Taxes, and firm size. Through an analysis of 52 companies traded during the period from 2015 to 2023 on the Pakistan Stock Exchange employing methodologies including Generalized method of moments (GMM) and correlation analysis, several key findings emerged. The analysis revealed significant positive relationships between various components of capital structure (including current liabilities, and non-current liabilities) and both ROA and ROE. This suggests that firms utilizing leverage as part of their capital structure tend to exhibit higher returns on assets and equity. Control variables such as total assets, Taxes, and firm size also exhibited significant impacts on both ROA and ROE. Higher returns were often seen by larger businesses and those with higher taxes, while total assets also played a role in influencing firm performance. The results show the significance of financing structure optimization decisions to improve company performance in dynamic economic contexts, offering insightful information to investors, financial managers, and legislators.

Dive deeper into industry-specific factors to understand how capital structure decisions vary across sectors, considering trends, regulations, and market dynamics. Examine the non-linear connections between an organization's performance and its capital structure components using advanced econometric techniques like nonlinear regression or machine learning.

Use qualitative methods like interviews or case studies to delve deeper into the decision-making processes behind capital structure choices. Incorporate qualitative factors such as management quality and strategic initiatives to gain a holistic understanding of financing effect on achievements. Conduct comparative analyses with firms from different countries to benchmark the influence of financing structure practices on overall outcomes. Track Capital structure choices and company effectiveness over time to understand their long-term effects and dynamics. Employ dynamic panel data models to capture the evolving relationships between debt components and firm performance. Finding the implications of capital structure decisions for regulatory policies and corporate governance frameworks to guide policymakers and practitioners.

Firstly, the research focuses on only 52 organizations related to three sectors of the Pakistan Stock Exchange. While this may provide insights into specific industries, it might not accurately represent the entire market or other sectors, limiting the generalizability of the findings. Secondly the study may not adequately account for outside variables like modifications in government policies, economic situations, or industry-specific dynamics that could influence the judgments about capital structure and company performance. Neglecting these factors may limit the ability to isolate capital structure's effect on a company's performance. The study covers the time frame starting from 2015 to 2023, which may not capture longer-term trends or cyclical fluctuations within the selected sectors. A longer time frame or additional data points could provide a deeper comprehension of the long-term relationship between financing structure and corporate success.

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