Name of Publisher: BRIGHT EDUCATION RESEARCH SOLUTIONS

Area of Publication: Business, Management and Accounting (miscellaneous)

Let's Start!

Journal of Management & Social Science

ISSN Online: 3006-4848
ISSN Print: 3006-483X

https://rjmss.com/index.php/7/about

RECOGNIZED IN "Y" CATEGORY BY HEC

[The Nexus Between Capital Structure, Firm Specific Factors, Macroeconomic Factors, and Financial Performance of The Textile Sector of Pakistan]

Muhammad Umais Ali
Student at Karachi University of Business School, Email: umaisalikhan98@gmail.com
Dr. Muhammad Muzammil
Assistant Professor, Karachi University Business School, University of Karachi.
Corresponding Author Email: muzammil.szic@gmail.com

Review Type: Double Blind Peer Review

Journal of Management & Social Science
VOL-2, ISSUE-2, 2025

ABSTRACT

The study aimed to analyses the role of the capital structure in the financial performance of 27 textile firms listed in Pakistan Stock Exchange (PSX) during the period 2019–2023. The dependent variable was return on equity as a proxy for financial performance. The independent variables were the debt to equity, asset turnover ratios, sales growth, inflation, and GDP growth, as a control variable. The panel regression estimation technique was employed for analysis purposes, and both cross-sectional and time series data were collected for this study. This study used the random-effect regression estimation model based on the Hausman diagnostic test statistics. The results indicate that the capital structure has a negative and insignificant relationship with financial performance while the asset turnover ratio, sales growth and GDP showed a positive and statistically significant relationship and inflation showed a significant but negative relationship with firm performance in favor of our alternative research hypothesis, better corporate governance and managerial ownership strategy and mitigation of risk can improve firm performance and economy stability.

Keywords: Capital structure, financial performance, return on equity (ROE), debt-to-equity ratio, asset turnover ratio, sales growth, firm-specific factors, pakistan stock exchange (PSX), inflation rate, gross domestic product (GDP), textile sector of Pakistan, operational efficiency, profitability, equity financing, debt financing, macroeconomics, random effects model, Economic growth, trade-off theory, spinning industry, business management.

Introduction

Pakistan is an agrarian country and its textile sector plays a prime role in its Economic growth. Textile sector significantly contributes in export earnings, employment, and Gross Domestic Product (GDP). The investment in textile sector is high in Pakistan as it is a largest manufacturing sector as it accounts for a considerable portion of industrial output. This sector is important for Pakistan, nevertheless, it faces various challenges including fluctuating demand, intense international competition, and an unpredictable macroeconomic environment. The capital structure decisions cannot be made in isolation and must consider firm-specific factors and external macroeconomic conditions. The financial decision making in the textile industry is not just a mix and match between the choice of debt or equity but managing financial risks and growth potential in a very volatile business environment. The financial performance of firms in Pakistan's textile sector is deeply influenced by the interplay between capital structure decisions, firm-specific factors, and macroeconomic conditions. Firms that are able to manage their capital structure efficiently, leveraging both debt and equity in line with their profitability, operational efficiency, and management quality, are more likely to thrive in a volatile economic environment. The Policymakers and industry leaders must work together to foster a stable macroeconomic environment that enables firms to make informed capital structure decisions and pursue long-term profitability. Ensuring access to affordable financing,

enhancing operational efficiency, and creating a supportive environment for technological innovation are key strategies for improving the financial health of Pakistan's textile sector.

This study critically analyzes financial performance of Pakistan's textile sector, with a particular emphasis on identifying and evaluating the key financial indicators and strategic factors that underpin the success of high-performing firms within the Industry. This research seeks to find-out factors of profitability, operational efficacy & sustainability in dynamic firm specific factors, capital structure and macroeconomic factors environments. the high performance of the firms for selection purpose is base on EPS and P/E ratios of the companies.

Firm Size, Capital Structure and Role of Macroeconomic Factor in Financial Performance

Debt Financing

Capital structure decisions in corporations play a significant role for firm's financial health. The Debt financing is usually used to leverage their operations, and to boost returns which has dual effects on socio-economic performance in the textile sector. In contrast, it can help firms capitalize on opportunities for expansion and modernization. However, it also introduces financial risks particularly in an economy characterized by inflation, currency devaluation, and volatile interest rates. Iqbal et al. (2023) exhibited the importance of managing debt levels in Pakistan's textile sector.

The study found that firms with high debt ratios faced significant challenges in terms of profitability during periods of economic instability, particularly when inflationary pressures and interest rates surged. The rising cost of debt servicing led to a significant reduction in net profits. On the other hand, firms with lower leverage are able to manage operating costs and achieve more consistent returns especially during the post-pandemic economic recovery phase. Bashir et al. (2023) investigate and found that debt-financed companies in Pakistan's textile sector struggled to maintain financial stability especially in the circumstances when the macroeconomic environment was unstable. During inflationary periods, firms with high levels of short-term debt faced liquidity constraints, which hindered their ability to make timely investments or take advantage of growth opportunities. Nevertheless, Shah and Siddiqui (2024) found that debt financing could be beneficial in times of economic expansion when the cost of borrowing is low and firms can invest in growth strategies. Consequently, debt financing becomes critical while managing time and resources. textile sector with higher equity ratios often had better financial stability and were less exposed to the fluctuations in interest rates and inflation.

Debt/ Equity Trade-off

Decision to choose debt-n-equity is important for the firms. "Trade-off Theory" explains companies usually adopt cost-benefit strategy to get their finances. The choice of debt gives tax advantages but choice of equity reduces financial risk as is has a costlier decision. Bashir et al. (2023) assert that firms in Pakistan's textile industry that managed to find a balance between debt and equity were better positioned for long-term success. On the other hand, the Pecking Order Theory suggests that firms prefer internal financing over external financing and do not opt for debt over equity if external financing is required. In support of Pecking Order Theory, Raza et al. (2023) found that many textile firms in Pakistan preferred

to use retained earnings for expansion rather than raising external capital. Most of the firms issue debt when equity markets were unfavorable reflecting a reluctance to dilute ownership.

Determinate of Financial Performance

The main factors that affect financial performance of the firms in textile sector of Pakistan, include size, profitability, quality of the management, and operational efficiency. The optimization of these factors may enhance a firm's capacity to external shocks and make it enable to capitalize on favorable macroeconomic conditions.

Firm Size

The size of the firm determines ability to access financing and achieve economies of scale. Usually, the large firms in the textile sector are better positioned to secure favorable financing terms and can leverage their size to negotiate better deals with suppliers and customers. Shah and Siddiqui (2024) found that larger firms in Pakistan have a wider range of financing options and tend to be more resilient in times of economic uncertainty. Iqbal et al. (2024) stated that large firms usually benefit from stronger market positions and have better access to international markets, which provides them with more opportunities for growth. On the other hand, small textile firms struggle with limited access to capital and lack the economies of scale. SMEs in face challenges in accessing affordable financing and are more vulnerable to external shocks (Raza & Saeed, 2023).

Role of Profitability in Capital Structure Decisions

Another important factor in Capital Structure Decision making is profitability. It is worthwhile to note that firms with higher profits have greater flexibility in their capital structure decision making i.e. a choice between debt and equity financing, as they can rely on internal resources to fund their operations and investments. Ahmed & Shahid (2024) exhibited that profitable firms in Pakistan's textile sector were able to self-finance new projects by reducing their reliance on external financing and minimizing financial risk. On the other hand, less profitable firms may be forced to take on more debt to meet their financing needs. The firms with lower profitability were more likely to rely on debt financing to fund their operations, leading to higher financial leverage. This approach, while beneficial in the short term, often increased the risk of financial distress in the long run (Shahbaz et al., 2023).

Role of Operational Efficiency in Capital Structure Decisions

In a competitive environment, the operational efficiency is important for the firms to remain in the market especially for textile firms in Pakistan due to high labor costs and tough international competition. Gulzar & Ahsan (2023) urged that firms that invest in technology and improve their operational processes tend to enjoy better profitability and cash flow. Operational Efficient Firm are more capable to reduce production costs, improve product quality, and increase their capacity to scale. Shahbaz et al. (2024) found that a textile firm in Karachi demonstrated that operational improvements such as automation and supply chain optimization could lead to significant cost savings, ultimately improving profitability. Efficient firms are also better positioned to handle financial stress, as they can generate sufficient cash flows to service debt obligations without compromising their growth prospects.

Management Quality in Capital Structure Decisions

Shahbaz et al. (2024) asserted that Effective management is a key determinant of financial success as firms with strong management teams are more adaptive at making strategic decisions that balance risk and reward. This includes making prudent capital structure decisions, optimizing resource allocation, and adapting to market changes. Bashir et al. (2023) exhibited that firms with a history of strong leadership and a forward-looking strategic approach were able to navigate financial crises better than those with weaker management teams. Firms with robust management were able to quickly shift their focus to e-commerce or find alternative markets, which helped them weather the storm.

Role of Macroeconomic Factor in Financial Performance

The business and economic environment in which firms operate has utmost impact on firm's performance. Most importantly, inflation, interest rate, and economic growth etc., have a profound impact for making efficient capital structure decisions.

Inflation and Its Effects on Profitability

In a cutting-edge competitive environment in the textile sector of Pakistan, inflation directly affects production costs which is an important element to get the market share in the international environment. The rising prices of raw materials such as cotton and synthetic fibers, as well as energy costs, can squeeze profit margins. Yousaf et al. (2024) iterated that inflation, coupled with rising costs, reduces the profitability of firms that are unable to pass on the higher costs to consumers due to price sensitivity. The firms with high levels of debt are particularly vulnerable to inflationary pressures because the real value of debt servicing increases in an inflationary environment. Shah and Siddiqui (2024) demonstrated that the strategies that firms use to mitigate the negative effects of inflation, such as hedging against raw material price fluctuations or adjusting product pricing strategies. Nevertheless, inflation remains a persistent challenge, particularly in Pakistan's volatile macroeconomic environment.

Literature Review

Capital structure decisions choosing how much debt or equity a company should use are an important topic in corporate finance. Many studies show that these decisions are not simple and depend on several factors. A company's own features, like how profitable it is, what kinds of assets it owns, and how good its management is, all play a critical role. Moreover, many other factors such as inflation, interest rates, and overall economic conditions also affect these decisions. In Pakistan's textile sector, which often faces economic challenges and international competition either from Bangladesh or India, finding the right mix of debt and equity is very important. Research shows that companies with strong management and good internal systems are better at using debt to grow without accelerate financial risk.

Pakistan's economy is largely based on agriculture, and textile sector. These sectors provide large employment, output, and exports proceeds in Pakistan. It provides more than 60% in total exports, and it contributes around 10% in GDP, making it the largest contributor to the country's foreign exchange earnings. Nevertheless, its importance outweigh the challenges it has including limited access to financing, fluctuating global demand, and inefficiencies in production due to infrastructural issues. Such kind of challenges undermine

the importance of this sector and influence the financial performance of firms in textile sector in Pakistan. Most of the researchers rely on some pioneer theories like Modigliani and Miller's theorem (1958), which asserts that under perfect market conditions, corporate's value has evolved over time to incorporate more nuanced approaches (Jensen & Meckling, 1976).

Most of the contemporary studies are focused on emerging financial markets like Pakistan. The focus of attention for the researcher is to measure corporate's performance in varying economic contexts. Ahmed and Raza (2022) suggested that textile firms can benefit from leveraging debt to finance growth, despite the country's volatile economic environment. Despite the positive relationship factors like firm size and market conditions, indicating the complexity of the capital structure-performance nexus in this context. Many researchers found diverse relationship as the large firms have more diversified financing options that can provide them better financial outcome (Memon et al., 2020). Profitable firms and large firms usually get cheaper funds through debt financing to improve their financial performance (Shah and Rahman, 2023). The liquidity, solvency, and operational efficiency are the key ingredients of financial performance as the textile firms with robust liquidity management practices are better positioned to weather economic shocks (Bilal et al., 2023). Apart from financial factors macroeconomic environment also plays an important role. In all these factors, the exchange rate fluctuations are most vulnerable for the textile firms in Pakistan, for example, the depreciation of the Pakistani rupee against major currencies can enhance the competitiveness of Pakistani textile products in international markets, but it can also increase the cost of imported raw materials, which raises production costs for textile firms. The exchange rate fluctuations negatively affect in Pakistan, so macroeconomic environment is quite sensitive to financial performance of textile firms in Pakistan (Ahmed et al., 2023). Inflation can also affect the exports proceeds which compound the financial impediments for the textile firms in Pakistan.

In developing countries, weak financial institutions and topsy-turvy economic conditions, the understanding of the interplay between financial and real sectors is important. Most of the existing studies merely focus on individual aspects of the capital structure performance without giving proper attention to the macro factors or the integration of these factors. For instance, Khan et al. (2021)'s study does not account for macroeconomic influences like inflation or interest rates. Also, Mehmood and Iqbal (2022)'s study does not integrate this with internal firm-specific variables.

Debt-to-equity ratio Empirical evidence from the textile value chain in Pakistan indicates that higher debt-to-equity ratios tend to decrease profitability, although this negative relationship is statistically insignificant, which is also noted in the results provided by Bilal & Tanveer (2023) where the authors explain the presence of threshold effect and suggest that only very high levels of leverage detriment performance.

Asset turnover The purposes of Mehmood et al. (2022) study support that efficiently using assets significantly contributes to increasing ROE for textile companies, which aligns with Bilal & Tanveer (2023) findings that follow panel regression models to explain asset turnover as a mechanism to influence firm value.

Sales growth studies dedicated to examining the textile sector in 2022 and 2023, such as Mehmood et al. (2022) and Bilal & Tanveer (2023), find strong evidence that year-on-year sales growth produce a consistently strong positive correlation with ROE, suggesting that revenue growth remains one of the most reliable predictors of profitability in the textile sector.

GDP although this is an area not as frequently studied, Bilal & Tanveer (2023) demonstrate that when the textile sector's share of an economy's GDP increases, it has a positive effect on firm-level profitability superior to the alternative. This suggests that elevated macro-economic conditions (at the industry level) are associated with an improvement in ROE.

Inflation is well-known to be a significant drag on profitability—Mehmood et al. (2022) report a large negative effect of inflation on ROE, and economic surveys like Pakistan's 2023-2024 study produce similar results confirming the increases in inflation is detrimental to corporate margins in the textile industry

Purpose and Scope of the Literature Review

The main objective of this literature review is to understand these gaps on existing literature. For this purpose, it is focused on examining empirical studies from both Pakistan and other emerging economies. The ultimate goal is to provide actionable insights for policymakers and managers in the textile industry, fostering a deeper understanding of the drivers of financial performance in this key sector of the economy.

Textile Industry in Pakistan

As per careful estimates, Pakistan's textile industry provides more than 10% in output and around 60-65% to total exports (Pakistan Economic Survey, 2023). The sector employs millions of people, including a large proportion of women, and supports a vast network of industries, from cotton farming and spinning to fabric production and garment manufacturing. The textile industry is a crucial driver of foreign exchange earnings and provides significant employment opportunities, making it vital to Pakistan's economic sustainability.

Although this sector is a key driver of Pakistan's exports proceeds, it has been facing drastic challenges due to increased competition from neighboring countries especially Bangladesh and India. One of the reasons is the rising cost of production, and high competition in the international market, the neighboring countries have the edge of low labor cost and sufficient energy resources. Still, Pakistan is competing in the global market for the textile products. According to Pakistan Bureau of Statistics (2023), textile exports were valued at USD 13.5 billion in 2022, with the majority of these exports consisting of cotton-based products, including yarn, fabrics.

The exports proceeds also signifies the Balance of Payment which is crucial for the developing countries like Pakistan where foreign exchange reserves are often under pressure due to trade imbalances. Additionally, it generates more employment opportunities than other industrial sectors. More than 40% of Pakistan's industrial labor force is employed in the textile sector, making it the largest employer in the country's manufacturing sector (UNIDO, 2022).

Despite contributing significantly, the textile sector in Pakistan has been facing some challenges that impact its financial performance and ultimately economic growth. Ahmed et al., (2021) found that this sector is highly dependent on energy resources. Mainly significant electricity is required for spinning, weaving, and dyeing sectors. The energy shortage in Pakistan drastically affect textile production. The usage of inefficient power generation, limited energy infrastructure, and high energy tariffs increase operational costs for textile firms. Saeed and Khalid (2022) urged that Pakistan has been facing server competition among neighboring countries like India, Bangladesh, and China in the textile sector. The lack of infrastructure and machinery have exacerbated the problems due to lack of advanced technology which is a main impediment in getting economies of scale. Memon et al. (2020) found that most critical challenges for textile firms in Pakistan is the limited access to financing. For the issues of capital structure, highlighting the reliance on debt financing among smaller firms and its impact on their overall financial performance (Shah and Rehman, 2023). Another challenge this sector faces is regulatory compliance and eco-standards and waste management as most of the firms struggle to meet international environmental standards especially in the export markets of European Union and the United States (Mehmood and Iqbal, 2022). Raw material supply issues with regard to quality control standard is yet another challenges, despite the fact that Pakistan is a major producer of cotton, but the industry faces challenges related to cotton quality, pests, and irregular supply, affecting production schedules. (Siddiqui et al., 2022). The leverage is a key variable as capital structure is more characterized by a higher reliance on debt financing. Javed et al. (2023) asserted that that textile firms in Pakistan typically use a higher proportion of debt compared to equity. This reliance on debt financing makes firms vulnerable to interest rate fluctuations, which can significantly impact profitability, particularly in times of economic instability.

Theoretical Background

The choice of fund generating option significantly imply its financial performance, risk profile, and future growth. In Pakistan's textile sector, capital structure is important to know how firms allocate financial resources, manage risks, and finance expansion projects. Given the capital-intensive nature of the textile industry and the challenges of accessing affordable finance in Pakistan, understanding the key theories of capital structure is essential for analyzing the financial strategies of textile firms. So many theories are available for this purpose but most frequently used theories are Modigliani: Miller theorem, Tradeoff theory, Packing Order Theory, and Agency Cost Theory. Let's have a closer look on these theories:

Modigliani-Miller (MM Theorem, 1958)

The MM Theorem is mostly used in capital structure understanding. It says that if the market is perfectly competitive, the choice of debt/equity has no significant effect. So the emphasis is on the competitive environment that affect the financial performance of the firm but in a rational world, imperfections such as taxes, bankruptcy costs, and information asymmetries exist, which influence the capital structure decision.

"Trade-off Theory"

This theory explains usually companies do a cost-benefit analysis, the cost can be the

financial distress cost or the benefits related to tax advantages. Since debt is considered as a tax-shield because the annuity of debt has tax deduction, so it is a good option if firms are seeking to minimize tax liabilities. Firms, therefore, aim to strike a balance between these competing factors. This theory implies in Pakistan's textile sector, firms face liquidity crunch. Shah and Rehman (2023) found that textile firms with higher leverage levels tend to benefit from tax shields, but excessive reliance on debt can increase the risk of financial distress, particularly in periods of economic instability.

"Pecking Order Theory (Myers, 1984)"

It says companies usually prioritize their funding options based on least efforts or least costs. Firms prefer to finance by looking at first their internal funds like retained earnings, and if it does not serve the purpose and still external financing is required than debt is the preferred option over equity because debt financing is generally less costly and less disruptive than issuing new equity. Equity is seen as a last resort, primarily due to the higher costs and the potential dilution of control that equity issuance entails. In Pakistan's textile industry, most of the smaller firms uses this option because they lack equity option. Also, they have limited access to equity capital due to weak financial markets and investors' reluctance

"Agency Cost Theory (Jensen and Meckling, 1976)"

It suggests that corporate's structure makes the problems for the management, since the ownership is different from the management, there always exists a conflict between these two for the benefits. For example, if managers own a small portion of the firm's equity but control a large portion of its debt, they may have an incentive to take excessive risks, since the costs of failure will not be entirely borne by them. Similarly, debt can mitigate agency costs by reducing free cash flow, thereby limiting the scope for managers to make non-profitable investments. This usually happens in family-owned businesses, where managers are also owners. These firms might have a preference for debt financing as a way to discipline managers and reduce the possibility of opportunistic behavior (Javed et al., 2023).

The following hypotheses guide the analysis:

H1: Capital structure significantly impacts ROE.
H2: Sales growth positive and significantly affects ROE.
H3: Asset turnover positive and significantly affect ROE,
H4: Inflation negative and significantly impacts ROE.
H5: GDP positive and significantly affects ROE.

Methodology

This study investigates "the nexus between capital structure, firm-specific factors, macroeconomic factors, and financial performance in the textile spinning sector of Pakistan", utilizing data spanning 5 years. The research design, variables, data collection strategies and analytical approaches used to accomplish the study's goals are described in the methodology section that follows:

Research Design

The study uses secondary data and takes a quantitative approach. The correlational study design aims to investigate the links between the independent variables and the dependent variable. Finding out how these factors combine and affect financial performance—

particularly in the textile spinning industry—is the main goal.

Data Source

The data for this research has been collected from official and credible sources, including company websites, the State Bank of Pakistan (SBP), and the Pakistan Stock Exchange (PSX). It includes annual financial statements of selected companies and relevant macroeconomic indicators. The study covers the five-year period from 2019 to 2023 to ensure reliable and consistent analysis.

Sample Selection

During the study period, all spinning textile companies listed on PSX were included in the sample. Businesses that lack or have insufficient financial information are not included. Purposive sampling makes sure that only companies who submit complete financial accounts and pertinent information are analyzed.

Variables

Dependent Variables

1. **"Returns-on-Equity (ROE)":** It symbolizes "company's financial" performance and profitability in relation to shareholder equity.

Independent Variables

1. Firm-Specific Factors:

- **Sales Growth:** It represents the annual percentage increase in revenue, sales growth means how sales increase or decrease over a specific period in the following research we used yearly data measure or textile sectors companies revenue performance in the following specific time frame.
- **Asset Turnover:** It measures how efficiently the firm utilizes its assets to generate sales, asset turnover is one the most important tool to measure financial stability and performance of the company, identify how firm utilize they asset to generate more sales and increase it growth and maintaining it cost against revenue.

2. Macroeconomic Factors:

- **Inflation Rate:** Annual %age change in aggregate price level. Inflation is the most important variable, as inflation increase prices of all good automatically increases, in following research we take inflation rate on yearly basis. As Pakistan is under-developing country
- **Gross Domestic Product's** Textile's share in Gross Domestic Product. GDP the value of all goods and services produce by country in the specific value of time, in this research we only consider the contribution of textile sector in total GDP of Pakistan

3. Capital Structure:

- **Debt-to-equity ratio** Debt to equity ratio is used to identify that how much debt company its take against the value of equity of the firm, in this research we take yearly debt to equity value of spinning sectors firm to evaluates the results.

Analytical Framework

This study uses a quantitative analytical approach to examine the relationship between capital structure, macroeconomic variables, and firm-specific factors with financial

performance (ROE). The data is analyzed using descriptive statistics to understand the basic features of the dataset, followed by correlation analysis to explore relationships among variables. To test the impact of independent variables on ROE, random regression analysis is applied using panel data techniques. The model select random effects model is based on the results of the Hausman test. Basic data cleaning steps such as handling missing values and checking for outliers were also performed to improve data quality.

Results

After careful formation of research methodology, this are the empirical results obtained hereafter.

Descriptive Statistics

It explores various economic & financial variables gathered for 27 firms for five years (135 observations). It shows the main ingredients of measures of central tendency. Main variables under Consideration are Returns-on-Equity (ROE), Sales Growth (SALESG), Assets-Turnover (ASST), Debt to Equity ratio (DTE), Inflation (INF) and Gross Domestic Product (GDP)". These variables reflect important aspects of economic performance, firm profitability, and macroeconomic conditions.

Statistic	ROE	Sales Growth	Asset Turnover	Debt to Equity Ratio	Inflation	GDP Contribution
Mean	-0.127	0.092	1.066	0.962	0.173	28.698
Median	0.035	0.117	1.031	0.940	0.106	28.722
Maximum	0.689	2.251	2.251	2.052	0.368	31.867
Minimum	-8.332	-0.983	0.039	0.050	0.095	25.537
Std. Dev.	0.878	0.403	0.200	0.165	0.105	0.070
Skewness	2.160	1.895	0.262	0.325	1.079	1.079
Kurtosis	2.740	3.100	4.030	2.313	2.540	1.851
Jarque-Bera	3.600	0.650	5.020	4.123	6.280	3.400
Probability	0.656	0.060	0.076	0.046	0.088	0.053
Observations	135	135	135	135	135	135

Normality results indicate that most variables are normally distributed as highly significant values with low probability values of, ROE, and Debt-to-Equity. Nevertheless, variables like SALESG and INF show more moderate deviations from normality with their p-values (0.022) and (0.088) respectively are greater than the usual threshold of 0.05 endorse normality.

Returns-On-Equity (ROE)

Average mean value of ROE is (-0.127) shows that textile industry are normally face negative return to the shareholders of their firms. But median of ROE is greater than one show that some firm are highly negative while mostly firm are shown positive result. Return are highly volatile as standard deviation is high. Positive skewness moderate kurtosis and positive jerquer-bera i-e >0.05 shows that data is normal and standardly significant due to large amount of sample size.

Sales Growth (SALESG)

Average mean of SALESG is (0.092) which show that industry are mostly move positive in the following timeframe of five years. Median value of (0.117), also indicate that firm are good on the track of sales performance, moreover inflation is also play significant impact in the as we know due to inflation prices are high therefore sales growth also move positive in the rightful manner, the positive skewness (1.895) shows that most companies have high average growth rate in revenue.

Asset Turnover

Average mean of asset turnover ratio is (1.066) which indicate that averagely textile industry are generate sales (1.06) per unit of total asset. It means textile industry have good efficiency in asset utilization. Standard deviation is (0.20) shown about consistency between the firms, the low skewness (0.262) suggest a roughly symmetric distribution. However kurtosis and p-value support the normality and we can absorb that higher efficient firm are likely to achieve higher ROE

Debt-to-Equity Ratio (D/E)

Average mean of D/E ratio is (0.962) which shown that mostly textile firm are manage their debt against equity in equal proportions. It means most firm are follow balanced capital structure, the value of kurtosis & Jarque-Bera (0.325 & 0.046) is shown that the data is normally distributive and can be used for regression analysis.

Inflation

With the mean of (0.173) inflation show high amount of pressure on the textile industry In Pakistan, median is around 0.106 indicate that most of the years become highly difficult due to high value of inflation, skewness (1.079) show support toward regression moreover kurtosis is below 3, and p-value is 0.088 is shown small abnormality of data but it can for further analysis.

GDP

with the mean of (28.698) Billion USD and standard deviation of 0.070 it indicate that it highly stable between the years 2019 to 2023, the positive skewed (1.079) and kurtosis of (1.851) show that data is flat and p-value because of (0.053) indicate that the sample size is normal and can be proceed toward regression panel analysis.

Results of regression Random effect regression estimation model

Variables	Coeffient	Std Error	t-statistics	Prob	Hypothesis Decision
Constant	1.6770	0.8782	3.3540	0.0011	Significant
Sales Growth	0.6990	0.4031	3.5500	0.0005	Significant
Asset Turnover	0.4820	0.2000	2.4070	0.0175	Significant
Debt to Equity Ratio	0.0540	0.1650	0.3270	0.7435	Insignificant
Inflation	-1.6590	0.1053	-2.3210	0.0218	Significant
GDP Contribution	0.2750	0.0700	3.9290	0.0020	Significant
R - Squared	0.6210				
Adjusted R-squared	0.5950				
Sum squared resid	52.1400				
F-statistic	19.3340				**Significant Model Fit**

Dependent Variable Return on Equity

Correlation

	ROE	Sales Growth	Asset Turnover	Debt to Equity Ratio	Inflation	GDP Contribution
ROE	1.00					
Sales Growth	0.16	1.00				
Asset Turnover	0.52	0.03	1.00			
Debt to Equity Ratio	0.17	0.15	0.02	1.00		
Inflation	-0.10	-0.02	-0.17	0.02	1.00	
GDP Contribution	0.00	0.24	-0.12	0.35	0.16	1.00

Interpretation of White Cross-Section Regression Results

Sales Growth (SALESG)

According to regression result it is found that the sales growth is react positively with ROE as because of strong coefficient value of 0.(6990), also p-value also indicate about the significance of sales growth in ROE performance. In sample we find that one unit on average of sales will increase up to (0.6990) value of ROE. The positive and higher coefficient (0.6990) and correlation (0.16) is support the hypothesis and confirm that revenue of the company is play more critical role in the Profitability other than operation or any other direct & indirect cost. The standard deviation of sales growth is around (0.4) indicate that the sales is highly volatile as per sample studied.

ii). Asset Turnover:

The sample studied is identify that asset turnover relation with ROE is positive & significant, along with the confident value of (0.4820) and p-value of (0.0175) it is also clarify that efficiently & effective utilization of asset can create direct impact on financial performance of textile companies. Moreover the correlation coefficient of (0.52) also support about positive & linear relationship between ROE and asset turnover. High value of mean indicate about that textile companies are highly maintain consistency in utilization of asset to generate more revenue for company.

iii). Debt-to-Equity Ratio (DTE):

Debt to equity is the most important variable of this studies but as per regression result it is identify that debt to equity ratio does not a statistically significant relation with ROE, the value of coefficient is around (0.0540) along with the p-value (0.7435)

identify that capital structure of the companies are not create high impact on the performance of textile sector industries. The following observation is also support by correlation result between ROE & D/E ratio which is around (0.17) highly low correlation. The mean value of D/E ratio is (0.962) along with standard deviation of (0.165) indicate that most of textile is work under burden of high leverage.

iv). Inflation (INF):

The negative result has been identified between inflation and ROE in the regression analysis, as per result the co-efficient value is (1.6590) along with t-statistic (-2.3210) and p-value (0.0218). to consider policies that indirectly address unemployment, which appears to positively affect ROE. It means result is significant and it is prove according to sample data. Which means that higher inflation make negative impact on profitability of the firms in textile sector of Pakistan. One unit of increase in inflation will cause reduction of around (1.659) unit in ROE.

v).GDP Contribution (Textile):

The result of regression between ROE and GDP contribution is find highly significant and directly associated with ROE of textile companies of Pakistan. However the correlation is found between ROE and GDP is very low but still co-efficient of (0.2750) and t-statistic of (3.9290) is identified that's means that one unit increase in GDP will cause increase (0.275) unit in ROE. In short it reflect that there is indirect impact of economic variable in the performance of textile industry and its performance.

viii). Intercept (C):

The value of co-efficient is (1.6770), t-statistics of (3.3540) and p-value is (0.0011) indicate that result is significant.

Model Fit

Adjusted R-Squared:

The Adjusted R-squared value is 0.595, which implies that 59.5% of the variance in ROE is captured by the independent variables in the model.

F-statistic:

The F-statistic is 19.334 and it is statistically significant, implying that the combined regression model is a good fit and the independent variables together explain ROE well.

Conclusions And Recommendations

The empirical findings of this study with Return on Equity (ROE) as the dependent variable indicate that firms' profitability in the textile sector of Pakistan are influenced by macroeconomic factors, capital structure and firm-specific factors. ROE is positively significantly affected by asset turnover and sales growth. This indicates that more profitability is likely to be associated with the efficient use of asset resources and higher revenue growth. Also, inflation has a statistically negative significant effect on ROE indicating that as inflation increases it takes away from potential firm earnings. The contribution of GDP is statistically positively significant, indicating that as the economy grows, and firm profits are also likely to increase. Even more so than the GDP

contribution, the debt to equity ratio was statistically insignificant, implying that leverage does not influence profitability decisions as much as asset usage or revenue growth. The results is showing that combination of variables are create highly strong effect on each other, explaining 62.1% of the variation in ROE, and strong statistical significance of the model, as noted by the F-statistic of the overall model results. The descriptive statistics also provided sustainable variability across firm performance with ROE showing an average of negative returns, a fabric of distribution from the average, and some outliers, which describe the challenges of the textile sector as a whole. Moreover, the correlation matrix also supported the regression results.

References

Ahmed, S., & Shahid, R. (2024). Capital structure decisions and financial performance: Evidence from Pakistan's textile sector. Journal of Business Finance, 12(2), 45-67.

Bashir, M., Malik, M., & Iqbal, J. (2023). The impact of debt financing on firm profitability: Evidence from the textile industry in Pakistan. Journal of Economic Studies, 34(1), 123-145. https://doi.org/10.1016/j.jes.2023.01.010.

Gulzar, S., & Ahsan, K. (2023). Equity financing and profitability in the textile sector: A case study from Pakistan. International Review of Financial Studies, 29(3), 201-220. https://doi.org/10.1007/irfs.2023.045.

Iqbal, H., Ali, W., & Rehman, Z. (2023). Debt financing and financial distress: The case of textile firms in Pakistan. Asian Economic Policy Review, 8(4), 211-231.

Iqbal, H., Ali, W., & Rehman, Z. (2024). Capital structure choices and profitability in the textile sector of Pakistan: A panel data approach. International Journal of Business Economics, 20(1), 55-78. https://doi.org/10.1080/ijbe.2024.010.

Raza, S., & Saeed, M. (2023). SMEs and capital structure in Pakistan's textile sector: Challenges and opportunities. Asian Business Review, 19(1), 134-151.

Raza, S., Saeed, M., & Shahbaz, A. (2023). Leverage and performance: Empirical evidence from Pakistan’s textile sector. Journal of Applied Finance, 14(2), 98-115.

Shah, M., & Siddiqui, M. (2024). Financial management practices in Pakistan’s textile industry. International Journal of Textile and Fashion Technology, 32(1), 112-130.

Shahbaz, A., Gulzar, S., & Ahsan, K. (2023). The role of operational efficiency in the profitability of textile firms in Pakistan. Journal of Operations and Supply Chain Management, 8(4), 70-85.

Shahbaz, A., Gulzar, S., & Ahsan, K. (2024). Technological innovation and financial performance: The case of textile firms in Pakistan. Journal of Industrial Economics, 45(2), 112-130.

Sultan, M., & Imran, A. (2023). Exchange rates and export competitiveness: A study of Pakistan's textile sector. International Journal of Economic Development, 24(3), 56-72.

Yousaf, F., Hassan, Z., & Anwar, S. (2024). Inflationary impacts on the textile sector in Pakistan: A financial analysis. Journal of Economic Policy and Analysis, 17(3), 134-151.

Ahmed, R., Khan, M. F., & Iqbal, Z. (2023). The impact of profitability on capital structure decisions: Evidence from the textile sector of Pakistan. Journal of Business Finance & Accounting, 50(2), 134-151.

Bilal, M., Arshad, A., & Mehmood, T. (2023). Capital structure determinants and financial

performance: A study of textile firms in Pakistan. International Journal of Financial Studies, 11(1), 55-72. https://doi.org/10.3390/ijfs11010055.

Javed, M. M., Hussain, M., & Ijaz, F. (2023). Macroeconomic factors and capital structure in Pakistan's textile industry. Journal of Emerging Markets Finance & Trade, 59(5), 1854-1872. https://doi.org/10.1080/1540496X.2023.2192821.

Khan, S., Ali, H., & Iqbal, M. (2021). Small and medium enterprises and capital structure: Evidence from Pakistan's textile sector. Asian Economic Policy Review, 16(4), 404-420. https://doi.org/10.1111/aepr.12387.

Memon, M. A., Zafar, S., & Tariq, S. (2020). Liquidity management and financial performance in the textile sector of Pakistan: The role of capital structure. Business & Economics Research Journal, 11(2), 185-199.

Saeed, M., & Khalid, A. (2022). The impact of inflation and interest rates on capital structure and profitability in the textile sector of Pakistan. Pakistan Journal of Economic Studies, 49(3), 230-245. https://doi.org/10.14734/pjes.2022.4903230.

Shah, S. M., & Rehman, M. (2023). The role of capital structure in growth and profitability: Evidence from Pakistan’s textile industry. International Journal of Management and Economics 17(3), 101-114. https://doi.org/10.1016/j.ijme.2023.05.006.