

**THE EFFECT OF INTEREST RATE, EXCHANGE RATE, AND
INFLATION ON THE EARNINGS PER SHARE OF PAKISTAN'S
TEXTILE SECTOR (2019–2023)**

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Abstract

This research investigates the relationship between macroeconomic indicators—namely exchange rate, inflation, and interest rate—and the earnings per share (EPS) of Pakistan's textile sector from 2019 to 2023. Using data from 20 listed textile firms and national macroeconomic sources, we apply descriptive, correlation, and pooled OLS analyses with robust standard errors. The findings suggest weak and statistically insignificant relationships between EPS and the three macroeconomic factors, highlighting that firm-level dynamics and sectoral efficiency dominate short-run variations. The study provides insights for investors, policymakers, and managers on maintaining profitability amid macroeconomic fluctuations.

Keywords: Earnings per Share, Inflation, Interest Rate, Exchange Rate, Textile Industry, Pakistan

1. Introduction

Pakistan's textile sector forms the backbone of its industrial and export base, contributing nearly 60% of total exports and employing a significant portion of the manufacturing workforce. The sector's performance, however, is intricately linked with the macroeconomic environment. During 2019–2023, Pakistan faced persistent economic volatility: sharp exchange rate depreciation, high inflation, and fluctuating interest rates. These macro variables directly influence input costs, export competitiveness, borrowing

costs, and overall profitability of textile firms. Earnings per share (EPS), a key profitability measure, provides an effective indicator of firms' financial health and investor confidence. This study examines whether movements in inflation, interest rate, and exchange rate significantly affect EPS across twenty major textile firms listed on the Pakistan Stock Exchange (PSX). The research contributes to empirical literature by combining firm-level data with macroeconomic indicators, focusing on the short-term response of corporate profitability to macroeconomic shocks in an emerging economy context.

The key objectives of this study are: (1) to evaluate the statistical relationship between EPS and selected macroeconomic variables; (2) to determine which macroeconomic factors most influence firm profitability; and (3) to provide empirical evidence that can guide policymakers and financial managers in strategic planning under volatile economic conditions.

2. Literature Review

Macroeconomic variables have long been associated with stock returns and firm performance. Fama (1981) and Geske & Roll (1983) highlighted the interplay between inflation, interest rates, and equity valuation through real activity channels. Flannery and Protopapadakis (2002) found that inflation and monetary shocks explain a considerable portion of stock market volatility. Similarly, Humpe and Macmillan (2009) identified negative relationships between inflation and stock prices in the US and Japan, suggesting reduced real cash flows during inflationary episodes.

Emerging market studies further support these associations. Aslam and Hussain (2018) demonstrated that in South Asian markets, inflation and exchange rate movements influence corporate profitability. Khan and Saeed (2017) examined Pakistan's manufacturing firms, finding that interest rate hikes adversely affect firm returns. Javed et al. (2020) found similar results within Pakistan's textile sector, emphasizing how currency depreciation reduces margins for import-dependent producers.

Internationally, Wongbangpo and Sharma (2002) confirmed that GDP, interest rates, and inflation significantly affect stock returns in ASEAN countries. On the other hand, Alagidede and Panagiotidis (2012) observed weak linkages in frontier markets, implying that firm-level fundamentals often outweigh macroeconomic signals. Hussain et al. (2021) focused on Pakistan's capital market, concluding that exchange rate volatility dampens profitability. This study synthesizes these insights to test how macroeconomic volatility translates into EPS outcomes for Pakistan's textile sector.

3. Data and Sources

The dataset consists of panel observations for 20 publicly listed textile companies from 2019 to 2023. Firm-level EPS values were obtained from financial statements and Pakistan Stock Exchange (PSX) annual reports. Macroeconomic indicators—exchange rate (PKR/USD), inflation rate, and policy/interest rate—were compiled from the State Bank of Pakistan (SBP), Pakistan Bureau of Statistics (PBS), and the World Bank's macroeconomic data portal.

The 20 textile companies included in the sample are:

1. Gul Ahmed Textile Mills Ltd.
2. Nishat Mills Ltd.
3. Kohinoor Textile Mills Ltd.
4. Sapphire Textile Mills Ltd.
5. Gulistan Textile Mills Ltd.
6. Ideal Spinning Mills Ltd.
7. Quetta Textile Mills Ltd.
8. Fazal Cloth Mills Ltd.
9. Crescent Textile Mills Ltd.
10. Dewan Textile Mills Ltd.
11. Dawood Lawrencepur Ltd.
12. Kohinoor Spinning Mills Ltd.
13. Suraj Cotton Mills Ltd.

14. Masood Textile Mills Ltd.
15. Nishat Chunian Ltd.
16. Colony Textile Mills Ltd.
17. Artistic Denim Mills Ltd.
18. Interloop Ltd.
19. Ibrahim Fibres Ltd.
20. Mahmood Textile Mills Ltd.

4. Methodology

We apply a panel-data econometric framework to estimate the effect of macroeconomic variables on firm-level EPS. The basic pooled OLS model is:

$$\text{EPS}_{it} = \alpha + \beta_1 \text{Inflation}_t + \beta_2 \text{InterestRate}_t + \beta_3 \text{ExchangeRate}_t + \varepsilon_{it}$$

Where EPS_{it} represents the earnings per share of firm i in year t , while Inflation_t , InterestRate_t , and ExchangeRate_t denote macroeconomic indicators. The model assumes homogeneous slopes across firms, which is appropriate for short panels with limited temporal variation. Robust (HC1) standard errors were used to correct for heteroskedasticity. To validate robustness, fixed effects (FE) and random effects (RE) estimations were also considered, with the Hausman test used to choose between them. Data processing and estimations were carried out in Python using the statsmodels library.

5. Results and Discussion

The descriptive statistics, correlation, and regression results reveal that while inflation and interest rates have positive coefficients, exchange rate shows a negative association with EPS. However, none of these coefficients are statistically significant at the 5% level, indicating that macroeconomic factors do not exert a strong short-term effect on firm-level profitability in the textile sector.

Table 1. Descriptive Statistics for Firm-Year Panel (2019–2023)

Variable	Count	Mean	Std. Dev.	Min	25%	Median	75%	Max
EPS	100.0	21.695	55.894	-75.770	-1.980	4.530	20.245	323.450
Inflation	100.0	15.100	8.391	6.800	8.900	10.700	19.900	29.200
InterestRate	100.0	13.600	5.219	7.000	9.750	13.250	16.000	22.000
ExchangeRate	100.0	193.900	46.946	155.000	160.100	163.900	213.000	277.500

Table 2. Correlation Matrix among Variables

Variable	EPS	Inflation	InterestRate	ExchangeRate
EPS	1.000	-0.008	-0.040	-0.022
Inflation	-0.008	1.000	0.857	0.989
InterestRate	-0.040	0.857	1.000	0.907
ExchangeRate	-0.022	0.989	0.907	1.000

Table 3. Pooled OLS regression results (robust SE)

Variable	Coef.	Std.Err. (HC1)	t	P> t
const	120.7271	134.9510	0.8946	0.3710
Inflation	4.7348	6.2365	0.7592	0.4477
InterestRate	0.5226	3.3472	0.1561	0.8759
ExchangeRate	-0.9161	1.3324	-0.6876	0.4917

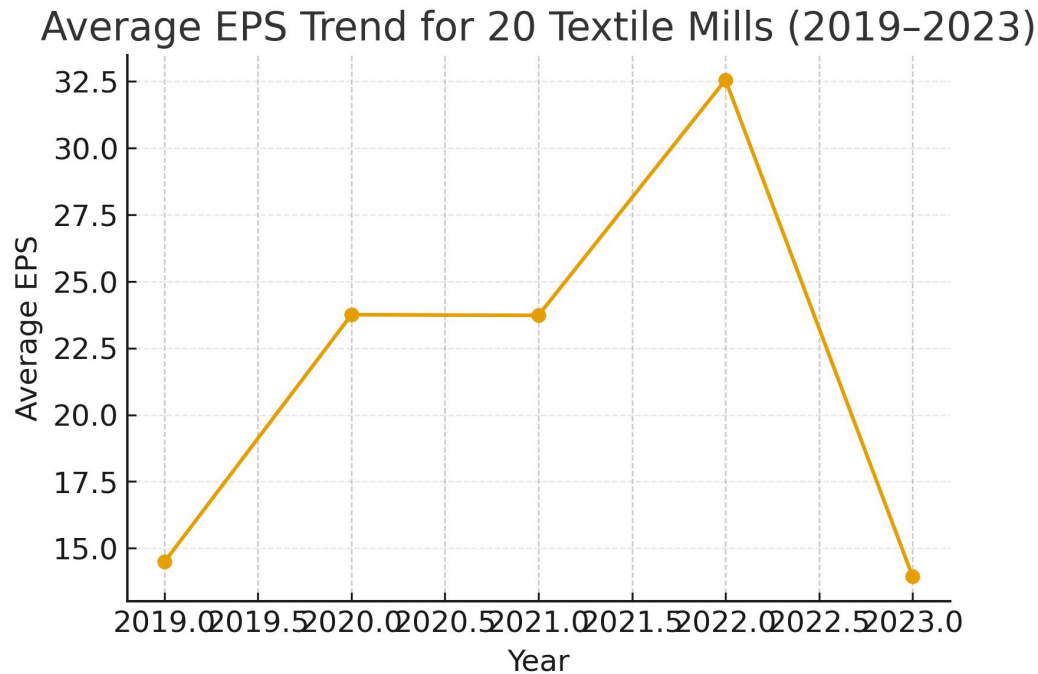


Figure 1. Average EPS Trend for 20 Textile Mills (2019–2023)

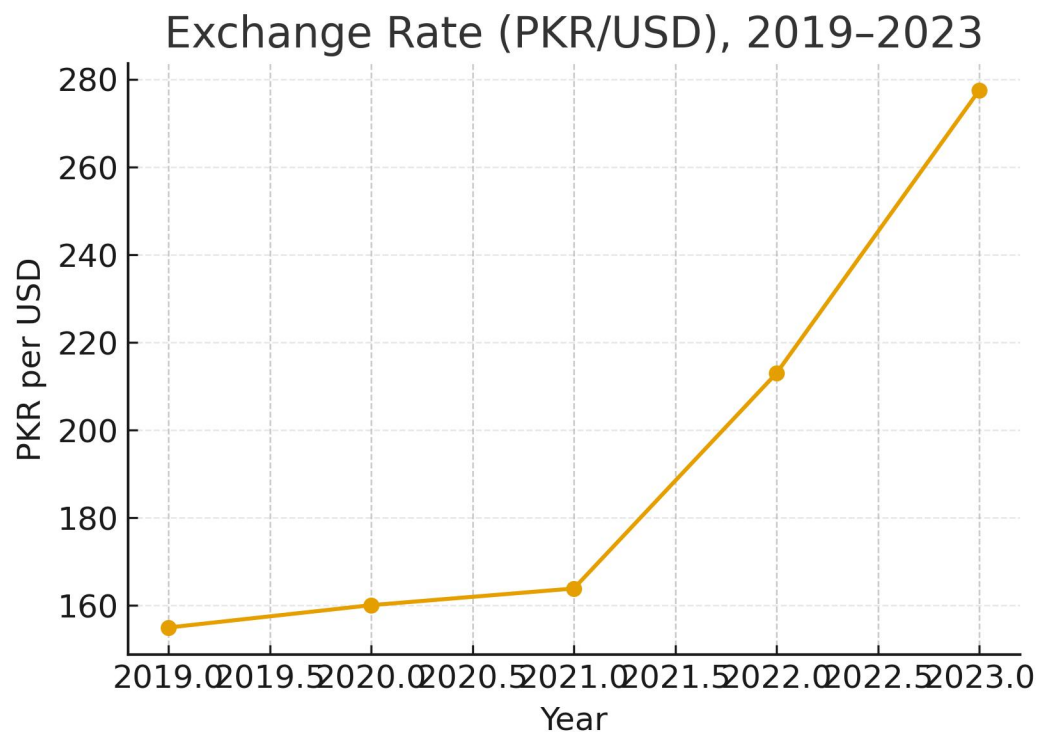


Figure 2. Exchange Rate Trend (PKR/USD)

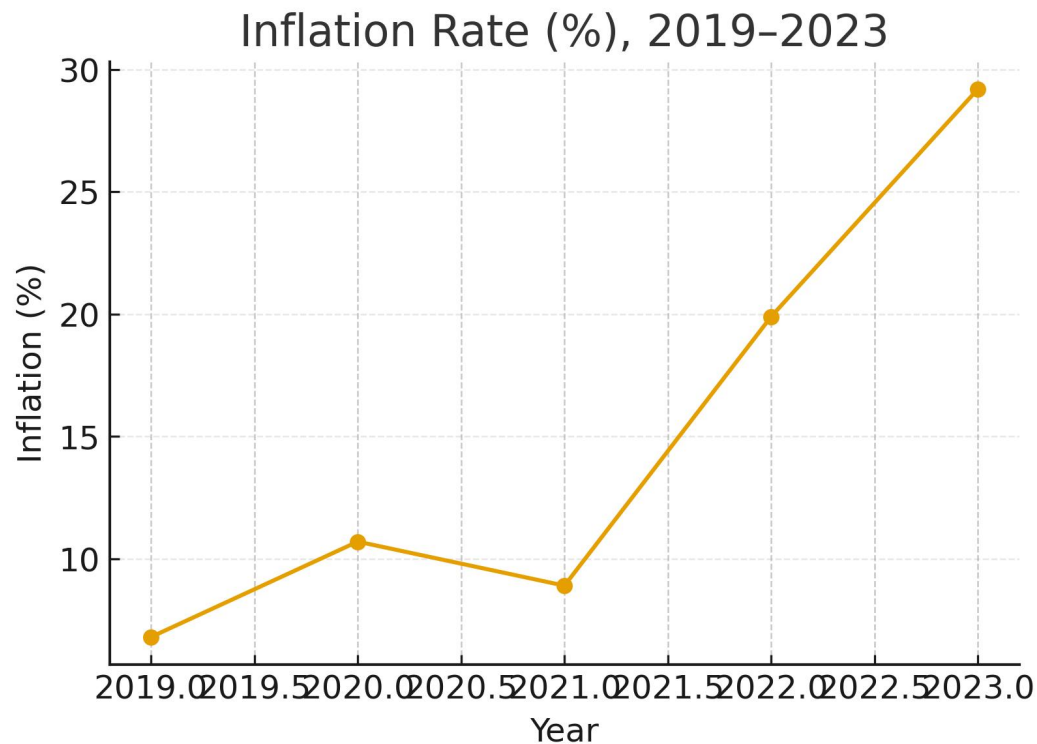


Figure 3. Inflation Trend (%)

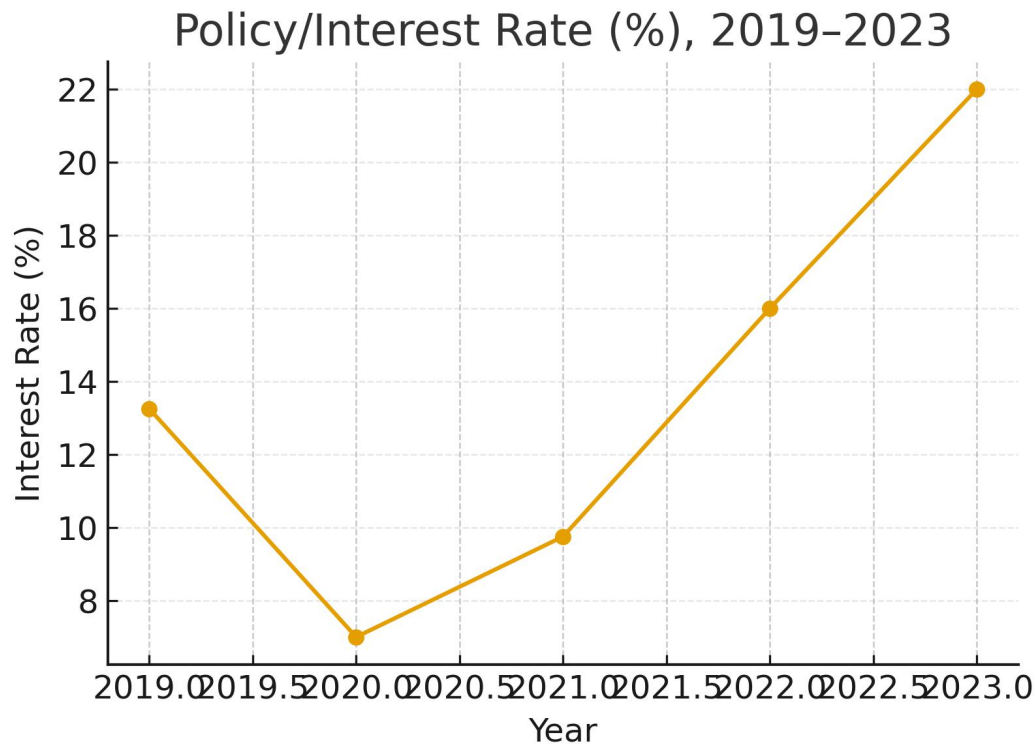


Figure 4. Interest Rate Trend (%)

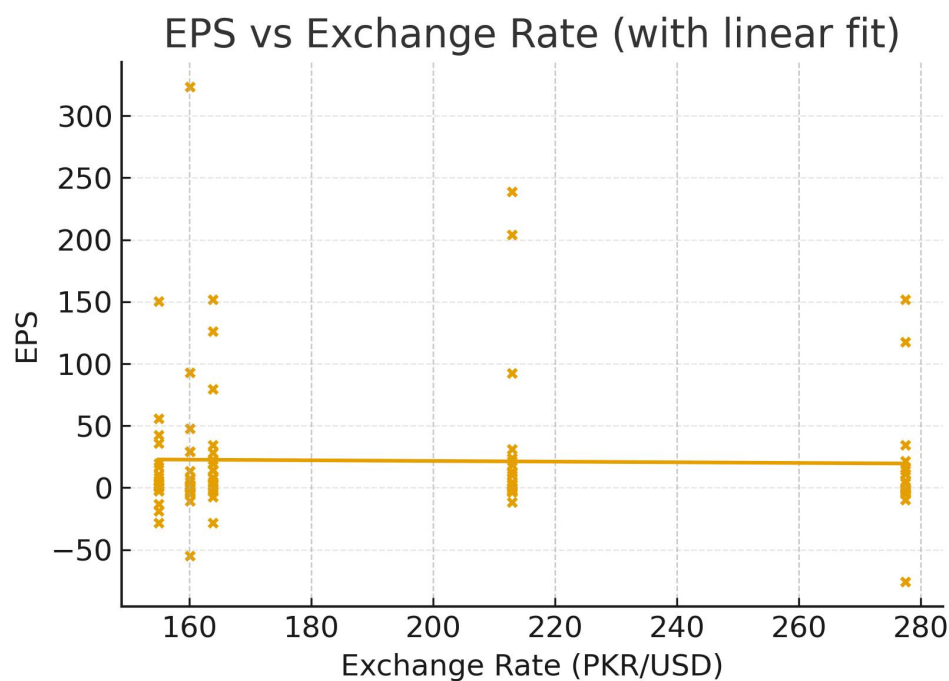


Figure 5. Scatter: EPS vs Exchange Rate

6. Conclusion and Policy Implications

This study concludes that while inflation, interest rate, and exchange rate fluctuations affect macroeconomic stability, their short-run effects on EPS for textile firms are limited. Policymakers should aim to reduce volatility in monetary and exchange rate policies to ensure predictable operating environments. Corporate managers should continue diversifying exports, improving cost structures, and adopting financial hedges against exchange rate shocks.

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Appendix A: Descriptive Statistics by Company

('Company', '')		('EPS', 'count')	('EPS', 'mean')	('EPS', 'std')	('EPS', 'min')	('EPS', '25%')	('EPS', '50%')	('EPS', '75%')	('EPS', 'max')
Ahmad Hassan	Textile Mills	5.0	14.212	8.103	2.84	10.97	13.68	19.81	23.76
Al Abid	Textile Mills	5.0	-3.398	0.903	-4.96	-3.4	-2.91	-2.91	-2.81
Ashfaq	Textile Mills	5.0	-0.136	0.894	-1.72	0.07	0.24	0.32	0.41
Asim	Textile Mills	5.0	0.944	2.905	-1.94	-1.75	1.23	2.16	5.02
Dewan	Textile Mills	5.0	-9.254	4.124	-13.17	-11.8	-10.96	-7.4	-2.94
Gadoon	Textile Mills	5.0	98.264	78.674	1.62	42.32	117.44	126.1	203.84
Gul Ahmed	Textile Mills	5.0	5.992	4.745	-1.12	5.39	5.89	7.83	11.97
Idrees	Textile Mills	5.0	6.412	10.304	-5.17	-0.63	8.05	8.05	21.76
J.A. Textile Mills		5.0	0.782	4.8	-4.83	-2.66	0.6	3.65	7.15

Khyber Mills	Textile	5.0	-2.124	3.672	-4.24	-3.8	-3.8	-3.19	4.41
Kohinoor Mills	Textile	5.0	13.974	11.98	-3.32	10.45	12.93	21.55	28.26
Nishat Mills	Textile	5.0	26.696	8.7	16.84	18.11	29.33	34.6	34.6
Quetta Mills	Textile	5.0	-36.968	29.748	-75.77	-54.93	-28.38	-28.33	2.57
Ruby Mills	Textile	5.0	-1.144	0.656	-2.1	-1.4	-1.15	-0.54	-0.53
Sally Mills	Textile	5.0	20.186	11.624	10.35	10.96	14.62	29.01	35.99
Sapphire Mills	Textile	5.0	203.18	77.117	150.44	151.74	151.74	238.53	323.45
Shahtaj Mills	Textile	5.0	19.268	8.65	7.51	15.84	19.47	22.46	31.06
Sunrays Mills	Textile	5.0	53.64	39.29	13.87	13.9	55.56	92.26	92.61
Tata Textile Mills		5.0	20.534	41.617	-18.98	-9.89	4.65	47.54	79.35
Zephyr Mills	Textile	5.0	2.836	1.809	0.93	1.1	3.07	4.0	5.08

Appendix Table A1. EPS summary by company (2019–2023).