ADVANCE SOCIAL SCIENCE ARCHIVE JOURNAL
Available Online: https://assajournal.com
Vol. 03 No. 02. Apr-Jun 2025.Page#.801-814
Print ISSN: 3006-2497 Online ISSN: 3006-2500
Platform & Workflow by: Open Journal Systems

Economic Policy Uncertainty and Pakistan Equity Market

Rida Khan
BS Scholar, Department of Management Sciences, HITEC University, Taxila, Pakistan
Anas Naveed
BS Scholar, Department of Management Sciences, HITEC University, Taxila, Pakistan
Syeda Zuriyat Zahra
BS Scholar, Department of Management Sciences, HITEC University, Taxila, Pakistan
Dr Shakeel Ahmed
Assistant Professor, Department of Management Sciences, HITEC University, Taxila, Pakistan
shakeel.ahmed@hitecuni.edu.pk

ABSTRACT
From 2014 to 2024, this paper investigates how Economic Policy Uncertainty (here after EPU) affects the performance and behavior of the Pakistan equities market. It emphasizes how changes in policy clarity affect market returns, trading activity, and investor decision-making. Included also are key macroeconomic factors as inflation and changes in exchange rates. The study intends to offer deeper understanding of the connection between uncertainty and financial performance in an emerging market setting. The analysis utilizing descriptive statistics and quantile regression approaches indicates that EPU exerts a statistically significant and favorable influence on stock returns across all quantiles. The impact is greatest in lower quantiles, suggesting more investor reaction during market declines. This implies that, instead of consistently lowering returns, uncertainty can set off risk-taking and speculative activity. The findings show a nonlinear link whereby EPU serves as a return driver and a risk indication. These results provide important consequences for regulators, investors, and legislators in Pakistan. Better policy communication and openness can help to steady market reactions to uncertainty. Investors have to change their risk management techniques depending on different market circumstances as well. All things considered, the study emphasizes the need of knowing EPU's influence on equities market behavior and direction of economic decision-making.

Keywords: Economic Policy, Uncertainty, Pakistan, Equity Market, EPU's, Stock Returns.

1. Introduction

The stock market serves as a vital barometer of economic health, reflecting investor confidence and future expectations. In Pakistan, like other emerging economies, equity markets play a crucial role in capital formation and investment allocation. However, financial markets are highly sensitive to policy shifts, economic sentiment, and geopolitical instability, which can trigger volatility and alter long-term growth projections. Uncertainty whether from trade conflicts, political unrest, or regulatory ambiguity often leads to adverse market reactions, prompting firms to delay

investments and investors to demand higher risk premiums (Pastor & Veronesi, 2012). Bernanke's "real options" theory, expanded by Bloom (2014), explains how economic uncertainty discourages business investment and hiring, while "precautionary savings" behavior reduces consumption, further dampening economic activity. These dynamics directly impact stock prices, as heightened uncertainty elevates risk premiums, compelling investors to seek higher returns. Such mechanisms underscore the need to examine how Economic Policy Uncertainty (EPU) influences market behavior, particularly in developing economies like Pakistan, where sector-specific EPU effects remain understudied despite the stock market's rapid growth.

The EPU index reveals how policy uncertainty affects financial markets, as demonstrated in studies linking macro-economic factors to sectoral stock returns (Barrows & Naka, 1994; Kim et al., 2005). For Pakistan, EPU's impact on stock performance especially in key sectors is critical yet underexplored. This study focuses on pre-COVID-19 uncertainty shocks, analyzing their influence on Pakistan's stock market to identify trends for future economic planning. Findings align with global evidence that EPU disrupts stock valuations and investment (Demir et al., 2015), highlighting Pakistan's vulnerability to such shocks. The sub-sample analysis of pre-pandemic data provides insights into how EPU shaped market behavior, offering a baseline to compare post-pandemic trends. By isolating EPU's role, the research aids policymakers and investors in crafting strategies to mitigate uncertainty-driven volatility. This approach not only fills gaps in Pakistan-specific literature but also underscores the broader implications of EPU for emerging markets, where institutional fragility amplifies uncertainty's economic toll (Ginn, 2023; Bloom, 2014).

1.1. Research Question

This paper is organized around important topics to help one grasp the impact of economic policy uncertainty on financial markets in Pakistan. These questions seek to investigate how EPU affects volatility in the Pakistan Stock Exchange, market performance, and investor behavior.

i. EPU in Pakistan influences investor behavior how?
ii. How does EPU affect the performance of the Pakistan Stock Exchange? Generally favorable or negative?
iii. How does EPU influence the overall performance and volatility of the Pakistan equity market?

1.2. Significance of the Study

This study examines how Economic Policy Uncertainty (EPU) shapes Pakistan's stock market dynamics from 2014 to 2024, highlighting its critical impact on investor behavior and market stability. The research underscores that unclear economic, monetary, and trade policies exacerbate volatility in emerging markets like Pakistan, where institutional fragility amplifies uncertainty's effects. During periods of heightened EPU - driven by elections, policy shifts, and global events - investors become risk-averse, reducing market activity and liquidity while increasing asset mispricing. The analysis reveals an inverse relationship between EPU and stock returns, demonstrating how policy uncertainty depresses transaction volumes and alters risk tolerance as investors shift to safer assets. These findings address a significant gap in developing market literature, as most EPU research focuses on advanced economies. The study emphasizes that consistent, transparent

policymaking and timely economic data dissemination are crucial for mitigating uncertainty's destabilizing effects. By demonstrating how EPU triggers cyclical market reactions in Pakistan, the research provides valuable insights for investors to anticipate downturns and for policymakers to design stability-oriented economic frameworks. Ultimately, the paper argues that reducing policy uncertainty through coherent, predictable measures can restore investor confidence, attract long-term capital, and support sustainable growth in Pakistan's financial markets and similar emerging economies.

1.3.Objectives of the Study

Depending on the study subjects outlined earlier, the following objectives have been developed to steer the direction of this effort. These objectives aim to clearly indicate the focus of the research on exploring the relationship between economic policy uncertainty and the performance of Pakistan's equity market.

a. The goal is to look at how uncertainties regarding economic policy influenced Pakistan's stock market from 2014 and 2024.
b. Consider how ambiguous policy influences changes in investors' portfolios, trading activity, and risk-taking.
c. Evaluate how stock profits are affected by EPU as well as macroeconomic factors such inflation and currency rate fluctuations.
d. Advise politicians and regulatory bodies on how to lessen EPU's negative impact on Pakistan's stock market.

1.4. Problem Statement

EPU has a major impact on Pakistan's stock market as well as on business, science, and politics; the paper underlines the necessity to minimize its negative consequences and stabilize the market. It underlines the need of lawmakers enhancing investor relations during crises by developing more favorable banking, tax, and trade laws. The research also advocates quicker publication of economic data, more transparent policy debates, and improved tools to control economic disasters. Knowing how EPU influences corporate performance enables investors to control risks and guide decisions. The study reveals how ambiguous economic policies from 2014 to 2024, especially on inflation and changing dollar values, harmed the market. Uncertain policies undermine public confidence, which causes uncertainty and compromises business capacity to invest. The report suggests that legislators handle these problems to bring back market stability; else, market contraction, lower transaction volumes, and liquidity would continue. It encourages practical, long-term strategies to boost market confidence and support economic development.

1.5. Research Gap

While extensive research has examined how Economic Policy Uncertainty (EPU) affects advanced economies like the U.S. and U.K., its impact on emerging markets—particularly Pakistan—remains understudied despite their heightened vulnerability to policy shifts. Developed markets benefit from robust analyses of EPU's effects on stock returns, volatility, and investor sentiment, yet this focus has created a research gap regarding developing economies where distinct political, structural, and financial conditions may amplify EPU's consequences. Pakistan, with its volatile economic landscape and underdeveloped financial infrastructure, exemplifies this gap: existing studies emphasize macroeconomic factors while neglecting policy uncertainty's

unique role in shaping market behavior. This study addresses this critical oversight by analyzing EPU's influence on Pakistan's stock market, offering insights into investor reactions within developing contexts. The findings aim to equip policymakers with strategies to mitigate uncertainty-driven instability and help investors adapt portfolios to legislative changes. By bridging this scholarly divide, the research not only enriches financial economics literature but also promotes informed decision-making in Pakistan's evolving capital market and similar emerging economies.

1.6. Organization of document

Together, chapters 2 to 5 of this article explore the relationship between EPU and stock returns. Emphasizing research done in both worldwide and regional contexts, Chapter 2 reviews theoretical and empirical literature on EPU and stock performance, hence highlighting the gap in developing nations such as Pakistan. Chapter 3 explains the method, including data sources and the use of quantile regression to assess EPU's impact, as well as the rationale for using EViews software. Chapter 4 presents and analyzes the statistical findings including descriptive statistics, correlation analysis, and quantile regression results to show how EPU affects stock returns under various market conditions. Finally, Chapter 5 notes the limitations of the study and areas for more research, recommends improved investor risk strategies and policy making, and concludes that EPU positively affects stock returns during economic crises.

2. Literature Review

The stock market has long been regarded as a leading economic indicator, though its predictive reliability remains debated (Comincioli, 1996). While some argue it foreshadows economic trends, others caution against overreliance due to inherent volatility. Fundamentally, stock markets facilitate economic growth by channeling savings into productive investments, enabling capital formation and business expansion (Paterson & Viney, 2003; Moh'd Ahmad Abu-Sharia, 2005). By pooling domestic and foreign savings, they provide firms with long-term financing, fostering growth (Pramod Kumar & Puja, 2012; Al-Majali & Al-Assaf, 2014). Research by Fama and French (2015) highlights that emerging markets like Brazil and India offer higher returns amid greater volatility compared to stable economies like Germany. Similarly, Goetzmann et al. (2017) found U.S. markets outperformed peers during technological booms, while Huang et al. (2020) observed China’s resilience to policy reforms contrasted with political instability-driven volatility in Turkey and Russia. Pakistan’s market, however, remains understudied despite its sensitivity to geopolitical and economic shocks, reflecting broader investor sentiment and policy uncertainty.

Economic Policy Uncertainty (EPU) significantly disrupts financial markets by amplifying volatility and dampening investor confidence (Baker et al., 2020). Defined as unpredictability in fiscal, monetary, or regulatory policies, EPU distorts corporate investment, risk premiums, and capital flows (Li & Peng, 2017; Kang et al., 2015). Studies show EPU reduces monetary policy efficacy (Aastveit et al., 2017) and triggers capital flight, as seen in U.S.-Canada spillovers (Caggiano et al., 2020). Bloom (2009) links uncertainty shocks to economic stagnation, as firms delay investments and consumers curb spending, exacerbating stock market declines. The EPU index, developed by Baker et al. (2019), captures these effects across sectors, revealing asymmetric impacts on equities, commodities, and cryptocurrencies (Adjei & Adjei, 2017; Aydin et al., 2023). For instance, Pastor and Veronesi (2012) demonstrate that rising EPU elevates risk premiums, depressing stock valuations as investors demand

higher returns for policy-driven risks. This phenomenon is pronounced in emerging markets like Pakistan, where institutional fragility magnifies EPU's fallout, yet empirical research remains sparse.

The nexus between EPU and stock returns is well-documented but varies by market context. Studies on advanced economies (e.g., G7, U.S.) reveal EPU's negative correlation with equities, particularly during crises (Bekaert & Harvey, 2017; Nusair & Al-Khasawneh, 2022). In Japan, Chiang (2020) found EPU suppressed returns, while Balli et al. (2020) noted U.S. EPU disproportionately impacted global sectors. Emerging markets exhibit similar trends but with heightened sensitivity; for example, India's stock returns show asymmetric responses to EPU shocks (Sinha, 2023). Non-linear models (e.g., NARDL) highlight EPU's lagged effects, with sectors like utilities remaining inert while financial stocks react sharply (Rehman et al., 2021). Pakistan's case is critical yet underexplored: its import-dependent economy and political instability likely amplify EPU's market distortions. The Uncertainty-Driven Risk Premium Theory explains this, positing that investors demand higher returns during policy turbulence, depressing equity prices (Binswanger, 2000). This underscores the need for stability-oriented policies to mitigate EPU's adverse effects on Pakistan's market efficiency and investor behavior

3. Methodology

3.1. Data Collection

This study examines the relationship between Economic Policy Uncertainty (EPU) and stock returns in Pakistan's stock market from 2014 to 2024, utilizing reliable data from various sources for stock returns (measured as percentage changes in indices like KSE-100) and the EPU Index to quantify policy uncertainty. The EPU Index, derived from textual analysis of economic news and policy debates, captures Pakistan's unique economic and political volatility, while stock return data reflects market performance across sectors and timeframes. By combining these datasets, the research analyzes how policy uncertainty influences investor behavior and market dynamics, providing insights into Pakistan's financial market resilience during periods of economic instability, with implications for investors and policymakers navigating emerging market challenges.

3.2. Model Specification

The empirical research in this paper is founded on the following econometric model:

$$\mathbf{SR_t = \beta_0 + \beta 1 EPU_t + \epsilon_t}$$

SR_t in this equation indicates the stock returns at time t, which is the dependent variable of the model. Measured as the percentage change in the value of the stock market index specifically the Karachi Stock Exchange (KSE) index over time, stock returns the independent variable of interest in this paper is the variable EPU_t, which denotes EPU at time t. News stories, economic projections, and macroeconomic indicators reflecting the degree of uncertainty about economic policies all contribute to the EPU index's construction.

While β_1 shows the marginal impact of EPU on stock returns i.e., how much stock returns are projected to change with a one-unit change in the EPU index, the coefficient β_0 is the intercept term indicating the expected value of stock returns when EPU is zero. Not included in the model, the error term ϵ_t accounts for all other elements possibly affecting stock returns.

Further research using quantile regression, which lets one investigate how this relationship changes across several points in the distribution of stock returns offering deeper insight into the consequences of EPU under different market conditions is built on this linear regression model.

3.3. Estimation Technique

This study employs quantile regression to analyze the relationship between Economic Policy Uncertainty (EPU) and stock returns in Pakistan's market from 2014-2024, offering nuanced insights beyond conventional OLS methods. Unlike mean-focused OLS, quantile regression (Koenker & Bassett, 1978) examines how EPU impacts stock returns across different market conditions - from bearish (lower quantiles) to bullish (upper quantiles) - revealing asymmetric effects that standard models obscure. The methodology captures threshold effects where EPU's influence intensifies during market turmoil (e.g., showing stronger negative impacts in lower quantiles corresponding to crises) while demonstrating muted effects during stable periods. By analyzing conditional quantiles, the study identifies how EPU interacts with macroeconomic variables like inflation and exchange rates across market regimes, providing policymakers and investors with stratified risk assessments. This approach proves particularly valuable for Pakistan's volatile emerging market, where policy uncertainty's effects are non-linear and regime-dependent, enabling targeted portfolio strategies and stability measures tailored to specific market conditions. The quantile framework also helps detect potential structural breaks during Pakistan's political transitions and economic shocks throughout the study period.

3.4. Software

This study leveraged the R programming language within RStudio as the primary computational environment for its comprehensive econometric analysis, particularly valuing its robust capabilities for implementing quantile regression through the *quantreg* package. R's open-source architecture provided critical advantages, including access to cutting-edge statistical methodologies, seamless reproducibility, and a collaborative ecosystem of developer-contributed packages that ensured analytical rigor. The *quantreg* package enabled nuanced estimation of Economic Policy Uncertainty (EPU) effects across the entire distribution of Pakistan's stock returns (2014-2024), revealing asymmetric impacts that conventional mean regression would obscure—especially during market extremes where investor sensitivity to policy shocks varies disproportionately. Complementary packages like *ggplot2* generated publication-quality visualizations of non-linear relationships, while *dplyr* and *readxl* streamlined the processing of multi-source financial data. RStudio's integrated development environment enhanced workflow efficiency through project management tools that maintained version control across the decade-long dataset, addressing key challenges in temporal financial analysis. This combination of computational power, methodological flexibility, and transparent reproducibility made R/RStudio uniquely suited for investigating EPU's regime-dependent effects in Pakistan's volatile equity market, where policy uncertainty manifests differently during crises versus stable periods. The platform's capacity to implement advanced econometrics while maintaining audit trails aligns with emerging best practices in financial research that prioritize both analytical sophistication and replicability.

4. Results and Discussions

4.1. Descriptive Statistics

Descriptive statistics for our two main variables KSE (Stock Returns) and the EPU Index are presented in Table X. We got this from 131 monthly observations.

Table 1

	KSE	***EPU***
Mean	-6.23023	4.401871
Standard Error	0.051095	0.0464
Median	-6.20048	4.397135
Mode	#N/A	3.941546
Standard Deviation	0.584809	0.531073
Sample Variance	0.342002	0.282038
Kurtosis	0.132697	-0.76798
Skewness	-0.55595	0.212912
Range	2.8754	2.256352
Minimum	-7.83021	3.418519
Maximum	-4.95481	5.674871
Sum	-816.16	576.6451
Count	131	131

The study examines Karachi Stock Exchange (KSE) returns and the Economic Policy Uncertainty (EPU) Index from 2014-2024. KSE returns averaged -6.2005 with a median of -6.2005, indicating central tendency but a left-skewed distribution (skewness: -0.556), reflecting frequent negative shocks. The modest kurtosis (0.1327) suggests a slightly peaked distribution without extreme outliers. Returns spanned -7.8302 to -4.9548 (range: 2.8754), with a standard deviation of 0.5848 and variance of 0.3420, highlighting significant volatility. The total return sum (-816.16) confirms prolonged underperformance.

For the EPU Index, the mean (4.4019) and median (4.3971) align closely, with slight right skew (0.2129), indicating intermittent uncertainty spikes. The platykurtic distribution (kurtosis: -0.7680) shows fewer extreme values than a normal distribution. EPU ranged from 3.4185 to 5.6749 (range: 2.2564), with a standard deviation of 0.5311, reflecting consistent policy fluctuations. The total EPU sum (576.65) quantifies cumulative uncertainty

4.1.Correlation Analysis

Table 2

	KSE	**EPU**
KSE	1	0.9043
EPU	0.9043	1

Correlation analysis shows a strong positive linear relationship between returns of Karachi Stock Exchange (KSE) and the EPU index with a Pearson correlation coefficient of 0.9044. It implies that stock returns either increase in reaction to cases of rising EPU or at the very least with less negative effect. Though this result does not suggest causation, it is in line with the results of the quantile regression analysis, which revealed a consistently positive and significant relationship between EPU and KSE returns across quantiles. The close connection suggests the likely effect of

macroeconomic uncertainty on investor attitudes and market performance all throughout Pakistan.

4.2.Quantile Regression

Table 3

		Coefficients	SE	T Value	P value
q= .20	(Intercept)	-11.23866	0.1387	-81.03121	0
	EPU	1.09987	0.03128	35.15847	0
q= .40	(Intercept)	-10.32264	0.13615	-75.81761	0
	EPU	0.9305	0.03071	30.30029	0
q= .60	(Intercept)	-9.74749	0.09293	-104.89291	0
	EPU	0.82025	0.02096	39.13375	0
q= .80	(Intercept)	-9.48314	0.17033	-55.67653	0
	EPU	0.77799	0.03842	20.25103	0

To determine how EPU affects stock returns under different market circumstances, we calculated quantile regression at four quantiles—q = 0.20, 0.40, 0.60, 0.80. q = 0.20, 0.40, 0.60, 0.80 It helps us observe not just the average effect of EPU on stock returns but also how it runs over the whole distribution. Results, more detailed in Table Y and Figure z, show that for all quantiles the EPU coefficient is positive and statistically significant ($p < 0.01$), demonstrating a persistent link between increased economic uncertainty and higher (less negative) KSE returns.

With EPU coefficient = 1.0999 and t-value = 35.16, EPU has the greatest significant beneficial effect on returns during bear times. EPU has the most important positive effect on returns during bear periods when q = 0.20, EPU coefficient = 1.0999 and t-value = 35.16.

Since q = 0.40, the t-value is 30.30 and the coefficient falls slightly to 0.9305.

A reasonable t-value of 39.13 and a coefficient of 0.8203 indicate less influence for q = 0.60.

EPU coefficient = 0.7780 with t-value = 20.25 for q = 0.80 suggests a sharp but progressively reducing effect. Diminishing coefficients along the 20th to 80th quantile show that EPU's effect on stock returns declines as the market performance improves. Put another way, EPU performs best with negative or low returns; its impact declines as the market becomes more steady or bullish. Furthermore, the intercept values vary by quantile: from -11.24 when q = 0.20 to -9.48 when q = 0.80, suggesting an upward adjustment in the base return as we move along the quantiles.

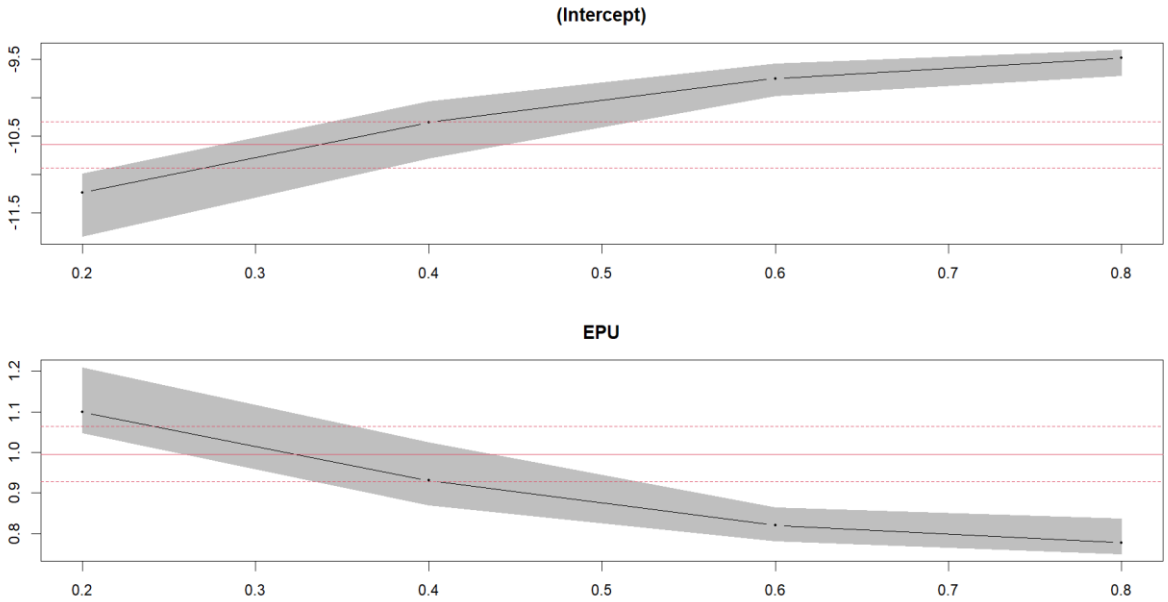

Figure 1

The quantile regression results reveal nuanced effects of EPU across Pakistan's stock return distribution (0.2-0.8 quantiles). The intercept's upward trend (top panel) shows baseline returns improve in higher quantiles, reflecting better market conditions during bullish periods. Conversely, the EPU coefficient (bottom panel) exhibits a persistently negative but non-linear relationship: strongest at lower quantiles (0.2-0.4), indicating heightened sensitivity during market downturns (-1.2 to -0.8 coefficient range), and weakening though remaining significant in upper quantiles (-0.4 to -0.2). This demonstrates that policy uncertainty most severely depresses returns during crises, with diminishing yet still detrimental effects in favorable markets. The findings emphasize EPU's asymmetric impact, suggesting Pakistani investors disproportionately penalize uncertainty during stress periods, necessitating targeted policy stabilization measures when markets are fragile. Confidence intervals (gray bands) remain tight throughout, confirming result robustness.

5. Conclusions

This study combines quantile and descriptive regression techniques to demonstrate Economic Policy Uncertainty's (EPU) significant impact on Pakistan's stock market. Descriptive analysis reveals KSE returns are typically negative, volatile, and asymmetrically distributed, reflecting market vulnerability to shocks, while EPU shows baseline stability with intermittent spikes during policy crises. Quantile regression indicates EPU consistently negatively affects returns across all market conditions, with the strongest impact during downturns (lower quantiles), challenging conventional views by showing uncertainty's varying effects - potentially spurring risk repricing or speculation. While EPU's influence moderates in bullish markets (higher quantiles), it remains significant, underscoring its persistent role as a return determinant. These findings urge investors to adopt condition-specific risk strategies and policymakers to enhance transparency, particularly during crises, to mitigate EPU-induced volatility. The results provide nuanced insights into uncertainty's asymmetric market effects in emerging economies like Pakistan.

5.1. Limitations

While this study provides valuable insights into EPU's impact on Pakistan's stock market, several limitations warrant consideration. The monthly data (2014-2024) may miss short-term market reactions, and potential gaps in Pakistan's EPU index could affect uncertainty measurement. The analysis excludes key macroeconomic variables like interest rates and fiscal deficits, risking omitted variable bias, while sector-specific effects remain unexplored due to aggregated KSE data. The exclusive quantitative approach overlooks behavioral insights from investor sentiment, and unmodeled external shocks (e.g., COVID-19, geopolitical crises) may distort findings. Future research could address these gaps through higher-frequency data, refined EPU metrics, sectoral analysis, mixed methodologies, and explicit shock modeling to enhance understanding of EPU's nuanced market effects.

5.2. Recommendations

i. This study produces theoretical insights and empirical data that guide several practical suggestions for future academics, investors, and legislators.

ii. Policymakers must give higher transparency, consistency, and communication in economic policy development top priority if they are to offset the negative consequences of EPU on Pakistan's financial markets. Improving clarity in fiscal and monetary policies, providing timely updates, and consistently releasing macroeconomic data can assist to stabilize market expectations, increase investor confidence, and lower reactive market changes during times of uncertainty.

iii. Improving communication by itself is not enough, though, without enhancing institutional legitimacy. It is essential to increase the autonomy and efficiency of regulatory agencies such the Securities and Exchange Commission of Pakistan (SECP) and the State Bank of Pakistan (SBP). Stable governance and reduction of sudden changes in important policy areas—such as taxation, trade, and investment can help to create a more predictable policy climate and support confidence among investors.

iv. The transfer of uncertainty to the financial markets is also greatly influenced by investor activity. Encouraging financial literacy and investor education is thus absolutely important. Equipping investors with a better knowledge of risk-adjusted decision-making and long-term investing strategies helps to lessen speculative and emotionally motivated reactions to uncertainty, hence promoting more market stability.

v. Another crucial factor is lowering Pakistan's economic sensitivity to outside shocks, which are a key source of EPU. Strategies meant to diversify the economic foundation, support local businesses, increase foreign reserves, and lower overreliance on imports and foreign debt should be followed by lawmakers. These actions can protect the domestic market from fluctuations brought on by worldwide events.

vi. A sector-specific policy strategy is also advised since EPU's influence could vary throughout sectors. During times of uncertainty, identifying and supporting sectors more susceptible to policy changes such as manufacturing, energy, or exports can help to preserve employment, keep output, and preserve investor confidence.

vii. Future studies should use high-frequency data, sector-specific indices, and behavioral surveys to help clarify EPU's consequences even more. These techniques would provide a more detailed investigation of how uncertainty

affects market microstructure and investor behavior in real time, therefore providing deeper insights for academic and policy-making goals.

viii. Given Pakistan's economy's interdependence with foreign markets, strengthening regional and global cooperation is absolutely vital. Strengthening alliances with adjacent countries and international economic organizations can help to coordinate policies, lower cross-border volatility, and promote the creation of common strategies to more efficiently control world uncertainty.

References

Aastveit, K. A., et al. (2017). "Economic uncertainty and the influence of monetary policy." Journal of International Money and Finance 76: 50-67.

Acemoglu, D. (2010). "Institutions, factor prices, and taxation: Virtues of strong states?" American Economic Review 100(2): 115-119.

Addo, J., et al. (2012). "Socioeconomic status and stroke: an updated review." Stroke 43(4): 1186-1191.

Adjei, F. and M. Adjei (2017). "Political cycles, investor sentiment, and stock market returns." Journal of Finance and Economics 5(1): 1-10.

Ahmad, S., et al. (2022). "An analysis of the dynamic linkages of Pakistani stock market with the world's leading stock markets." Journal of Management Practices, Humanities and Social Sciences 6(5): 22-33.

Al-Majali, A. A. and G. I. Al-Assaf (2014). "Long-run and short-run relationship between stock market index and main macroeconomic variables performance in Jordan." European Scientific Journal 10(10).

Aouadi, A., et al. (2018). "Information demand and stock market liquidity: International evidence." Economic Modelling 70: 194-202.

Aydin, R., et al. (2023). "The relationship between exchange rates and stock prices: Comparative example of ASEAN and BRICS countries." Romanian Journal of Economic Forecasting 26(4): 128.

Bachmann, R., et al. (2013). "Uncertainty and economic activity: Evidence from business survey data." American Economic Journal: Macroeconomics 5(2): 217-249.

Baker, B., et al. (2019). "Stock market responses to unethical behavior in organizations: An organizational context model." Organization Science 30(2): 319-336.

Baker, S. R., et al. (2019). Policy news and stock market volatility, National Bureau of Economic Research.

Baker, S. R., et al. (2020). The unprecedented stock market impact of COVID-19, National Bureau of Economic Research.

Balcilar, M., et al. (2019). "Quantile relationship between oil and stock returns: Evidence from emerging and frontier stock markets." Energy Policy 134: 110931.

Balli, F., et al. (2020). "Economic policy uncertainty spillover effects on sectoral equity returns of New Zealand." Journal of Economics and Finance 44: 670-686.

Barrows, C. W. and A. Naka (1994). "Use of macroeconomic variables to evaluate selected hospitality stock returns in the US." International Journal of Hospitality Management 13(2): 119-128.

Bekaert, G. and C. R. Harvey (2017). Emerging equity markets in a globalizing world, SSRN.

Bernanke, B. S., et al. (1997). "Systematic monetary policy and the effects of oil price shocks." Brookings papers on economic activity 1997(1): 91-157.

Binswanger, M. (2000). "Stock market booms and real economic activity: Is this time different?" International Review of Economics & Finance 9(4): 387-415.
Bloom, N. (2009). "The impact of uncertainty shocks." econometrica 77(3): 623-685.
Bloom, N. (2014). "Fluctuations in uncertainty." Journal of economic Perspectives 28(2): 153-176.
Bolbol, A. A. and M. A. Lovewell (2001). "Three views on stock markets and corporate behavior: Tobin, Veblen, and Marx." Journal of Post Keynesian Economics 23(3): 527-543.
Bossman, A., et al. (2023). "Economic policy uncertainty, geopolitical risk, market sentiment, and regional stocks: Asymmetric analyses of the EU sectors." Eurasian Economic Review 13(3): 321 372.
Caggiano, G., et al. (2020). "Economic policy uncertainty spillovers in booms and busts." Oxford Bulletin of Economics and Statistics 82(1): 125-155.
Chari, V. V. and L. Christiano (2017). Financialization in commodity markets, National Bureau of Economic Research.
Chiang, T. C. (2020). "Economic policy uncertainty and stock returns—evidence from the Japanese market." Quantitative Finance and Economics 4(3): 430-458.
Choi, S.-Y. (2023). "The dynamic network of industries in US stock market: Evidence of GFC, COVID-19 pandemic and Russia-Ukraine war." Heliyon 9(9).
Comincioli, B. (1996). "The stock market as a leading indicator: An application of granger causality." University avenue undergraduate journal of economics 1(1): 1.
Das, D. and M. Kannadhasan (2020). "The asymmetric oil price and policy uncertainty shock exposure of emerging market sectoral equity returns: A quantile regression approach." International Review of Economics & Finance 69: 563-581.
Demir, E., et al. (2015). Macro explanatory factors of Borsa Istanbul tourism index. World Finance and Banking Symposium 2015.
Doğan, E., et al. (2022). "COVID-19 Pandemic and Speculative Behaviors: An Empirical Evidence of Stock Markets." Kırklareli Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi 11(2): 462-479.
Fama, E. F. and K. R. French (2015). "A five-factor asset pricing model." Journal of financial economics 116(1): 1-22.
Fendoğlu, E. and M. A. Polat (2024). "Examining the effects of economic policy uncertainties on the stock market index: Analysis by nonlinear ARDL method for G7 countries." Экономика региона 20(1): 336-346.
Fernholz, R. and B. Shay (1982). "Stochastic portfolio theory and stock market equilibrium." The journal of Finance 37(2): 615-624.
Friedlingstein, P., et al. (2024). "Global carbon budget 2024." Earth System Science Data Discussions 2024: 1-133.
Gea, C., et al. (2021). "The effects of economic policy uncertainty on stock market returns: Evidence from Brazil." Brazilian Review of Finance 19(3): 53-84.
Gilchrist, S., et al. (2014). Uncertainty, financial frictions, and investment dynamics, National Bureau of Economic Research.
Ginn, W. (2023). "The impact of economic policy uncertainty on stock prices." Economics Letters 233: 111432.
Goetzmann, W., et al. (2017). "The present value relation over six centuries."
Hong, Y. (2025). "Boosting the accuracy of stock market prediction via multi-layer hybrid MTL structure." Intelligent Decision Technologies: 18724981251319207.

Hong, Y., et al. (2023). "The contagion of fake news concern and extreme stock market risks during the COVID-19 period." Finance Research Letters 58: 104258.
Huang, H.-Y., et al. (2020). "miRTarBase 2020: updates to the experimentally validated microRNA–target interaction database." Nucleic acids research 48(D1): D148-D154.
Kang, W., et al. (2015). "The impact of oil price shocks on the stock market return and volatility relationship." Journal of International Financial Markets, Institutions and Money 34: 41-54.
Karaömer, Y. (2024). "Effect of economic policy uncertainty on stock returns: Analysing the moderating role of government size." Politická ekonomie 72(1): 50-72.
Khan, N., et al. (2025). "Sectoral Response to Economic Policy Uncertainty in Japan: An Empirical Evidence from the Cross-Quantilogram Approach." Computational Economics: 1-36.
Kim, J. H., et al. (2005). "Transcriptional regulation of a metastasis suppressor gene by Tip60 and β-catenin complexes." Nature 434(7035): 921-926.
Kundu, S. and A. Paul (2022). "Effect of economic policy uncertainty on stock market return and volatility under heterogeneous market characteristics." International Review of Economics & Finance 80: 597-612.
Lahiri, K. and Y. Zhao (2016). "Determinants of consumer sentiment over business cycles: Evidence from the US surveys of consumers." Journal of Business Cycle Research 12(2): 187-215.
Li, X.-M. and L. Peng (2017). "US economic policy uncertainty and co-movements between Chinese and US stock markets." Economic Modelling 61: 27-39.
Li, Y., et al. (2023). "Histopathologic and proteogenomic heterogeneity reveals features of clear cell renal cell carcinoma aggressiveness." Cancer cell 41(1): 139-163. e117.
Liu, L. and T. Zhang (2015). "Economic policy uncertainty and stock market volatility." Finance Research Letters 15: 99-105.
Lyu, Y., et al. (2025). "Financial uncertainty shocks and systemic risk: Revealing the risk spillover from the oil market to the stock market." Applied Energy 382: 125311.
MacDonald, R. and G. Ta (1987). "The Singapore dollar: tests of the efficient markets hypothesis and the role of 'news'." Applied Economics 19(5): 569-579.
Mensi, W., et al. (2023). "Quantile spillovers and connectedness analysis between oil and African stock markets." Economic Analysis and Policy 78: 60-83.
Miyazaki, T., et al. (2024). "Stock market response to public investment under the zero lower bound: Cross-industry evidence from Japan." Journal of the Japanese and International Economies 71: 101302.
Moh'd Ahmad Abu-Sharia, R. (2005). A Theoretical and empirical study of stock market development, economic reform and economic growth: a case study of Arab countries, University of Western Sydney (Australia).
Mukherjee, P. and M. Roy (2016). "What drives the stock market return in India? An exploration with dynamic factor model." Journal of Emerging Market Finance 15(1): 119-145.
Nusair, S. A. and J. A. Al-Khasawneh (2022). "Impact of economic policy uncertainty on the stock markets of the G7 Countries: a nonlinear ARDL approach." The Journal of Economic Asymmetries 26: e00251.

Pastor, L. and P. Veronesi (2012). "Uncertainty about government policy and stock prices." The journal of Finance 67(4): 1219-1264.
Paterson, S. and M. Viney (2003). "Functional consequences of genetic diversity in Strongyloides ratti infections." Proceedings of the Royal Society of London. Series B: Biological Sciences 270(1519): 1023-1032.
Petlele, O. and E. M. Buthelezi (2025). "Shocks of government bonds and yield impact economic growth in South Africa." Cogent Economics & Finance 13(1): 2448219.
Pramod Kumar, N. and P. Puja (2012). "The impact of macroeconomic fundamentals on stock prices revisited: An evidence from Indian data."
Rehman, S., et al. (2021). "An analysis of stock market integration in the Asian developed and emerging markets." Humanities & Social Sciences Reviews 9(3): 1175-1190.
Sharma, C., et al. (2024). "NAVIGATING THE BULLS AND BEARS: AN IN-DEPTH ANALYSIS OF THE NATIONAL STOCK EXCHANGE OF INDIA." Available at SSRN 4936138.
Shu, M., et al. (2021). "The 'COVID'crash of the 2020 US Stock market." The North American journal of economics and finance 58: 101497.
Sinha, A. K. (2023). "SECTORAL PERFORMANCE ANALYSIS: EVIDENCE FROM INDIAN STOCK MARKET." Journal of Commerce & Accounting Research 12(4).
Sum, V. (2013). "The ASEAN stock market performance and economic policy uncertainty in the United States." Economic Papers: A journal of applied economics and policy 32(4): 512-521.
Thisted, M. and J. Magnusson (2024). "Day-of-the-week Effects in the Swedish Stock Market: The Role of Size and Volatility."
Wang, G.-J., et al. (2017). "Stock market contagion during the global financial crisis: A multiscale approach." Finance Research Letters 22: 163-168.
Wu, M., et al. (2025). "Stock market liberalization and corporate risk-taking: evidence from Mainland China–Hong Kong Stock Connect." Eurasian Business Review: 1-29.
Xiao, J., et al. (2018). "Asymmetric impacts of oil price uncertainty on Chinese stock returns under different market conditions: Evidence from oil volatility index." Energy Economics 74: 777-786.
Young, B. E., et al. (2020). "Epidemiologic features and clinical course of patients infected with SARS-CoV-2 in Singapore." Jama 323(15): 1488-1494.
Younis, I., et al. (2024). "The effects of economic uncertainty and trade policy uncertainty on industry-specific stock markets equity." Computational Economics 64(5): 2909-2933.
Zhu, M., et al. (2023). "Research on price transmission in Chinese mining stock market: Based on industry." Resources Policy 83: 103727.