

Economic Policy Uncertainty and Stock Market Returns: Evidence from Pakistan

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Abstract. On financial front, the stock markets are more vulnerable to uncertainties, and economic policy uncertainty (EPU) is one of them. Pakistan is a small open economy, and literature established that it has significantly been influenced by internal/external shocks including Asian Financial crisis, subprime mortgage crisis, earthquake, floods, COVID19, and others. The Pakistani stock market response to EPU over time remains an unanswered question till now. To address this research gap, the current study empirically investigates how EPU affects Pakistan stock market. Subject to availability, it utilizes monthly secondary data from August 2010 to December 2023 to estimate the ARDL (autoregressive distributed lag) method. Findings of this research demonstrate that, both in the short and long terms, the EPU has a considerable negative impact on the indexes of the Pakistani stock market. It suggests that an increased risk due to EPU erodes investor confidence and results in lower market valuations. The findings may help investors make informed decisions by simply looking at the moments of these uncertainty factors. Likewise, policymakers can use information on global uncertainty factors to manage volatility in the equity market. The research findings indicate that EPU can serve as a useful tool for policymakers, regulatory agencies, governmental organizations, and financial institutions to enhance market trust, promote stability and growth in Pakistani economy.

Key words: Economic policy uncertainty (EPU), Stock prices, Pakistan, ARDL

1 Introduction

When it comes to regulatory frameworks and government policies, the economic policy uncertainty (EPU), is regarded as a key risk factor (Al-Thaqeb and Algharabali, 2019). According to Bahmani-Oskooee and Saha (2015), the primary topics in financial economics include the significant debate regarding the factors that affect stock prices. Newspaper-based EPU index, recently developed by Choudhary et al. (2020), is constructed by taking articles from leading Pakistani newspapers. The index has two versions: i) EPU2 is grounded on articles taken from two major frequently published newspapers, Business Recorder and the Express Tribune and (ii) EPU4 is a broader measure based on four leading newspapers: Business Recorder, Express Tribune,

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DAWN and NEWS. Baker et al. (2016), argues that the primary determinants of stock prices in practically every nation include factors such as money supply, exchange rate, inflation rate, domestic production, and interest rates. Several studies have incorporated these characteristics as stock price determinants and attempted to empirically validate such inclusions and methodologies (Anari and Kolari, 2001; Bahmani-Oskooee and Saha, 2016; Baker et al., 2016; Fama and French, 1993; Moore and Wang, 2014; Nieh and Lee, 2001). According to Baker et al. (2016) “A non-zero probability of changes in the current economic policies that set the rules of the game for economic agents” is referred to as economic policy uncertainty (EPU). Changes in EPU may influence and significantly redirect the following channels:

Firstly, it has the potential to alter or postpone crucial decisions made by businesses and other economic entities, such as investment decision Chen et al. (2019), decisions about employment, spending, and savings (Arouri et al., 2016; Gulen and Ion, 2016). Secondly, it exacerbates the drop in investment and the recession of the economy by altering supply and demand channels and raising finance and manufacturing costs (Arouri et al., 2016; Julio and Yook, 2008; Pastor and Veronesi, 2012). Thirdly, it has the potential to raise market risks, particularly by diminishing the market’s value of government protection (Pastor and Veronesi, 2012). Finally, EPU has an impact on interest rates, projected risk premiums, and inflation (Khan, 2020; Pastor and Veronesi, 2013).

There are multiple ways in which the impact of EPU on asset values can manifest. First, by decreasing the possible benefits of the market protections provided by the different government agencies, EPU may raise risks in the financial markets (Pastor and Veronesi, 2012). The exciting body of research has broadly investigated the impact of EPU on numerous financial and economic variables across different circumstances. Among these studies, stock markets have been found to be more affected by increasing EPU. Likewise, Pakistan is a small open economy which is greatly influenced by unfavorable events such as floods, earthquake, economic and political instability. Hence, it is critical to understand the Pakistan stock market reaction to EPU over the time. Thus, this study empirically examines how Pakistan stock market indices react to EPU over the time.

2 Literature Review

This section describes the related finance theories and empirical literature to explain the underlying relationship between EPU and stock returns.

2.1 Theoretical Background

2.1.1 Efficient Market Hypothesis (EMH)

Theoretically speaking, the financial literature that examines the cross-section stock returns has seen a substantial change during the last fifty years. In this regard, Fama (1970), recorded the hypothesis of the efficient market (EMH). As stated by the EMH, asset values at any given moment may accurately reflect all public and private information that is accessible. The current understanding of financial theory is based on EMH. Nevertheless, the EMH is untestable and not described in any model. As a result, scholars have concentrated on specific variations from the first EMH proposed by (Fama, 1970).

2.1.2 Capital Assets Pricing Model (CAPM)

The creation of the Sharpe-Lintner Mossin model (of capital asset pricing), often known as the mean-variance equilibrium model, was one of the most significant advances in financial literature. The foundations for numerous significant scholarly works are based on this approach, but other people have criticized it. In periods of EPU, the capital asset pricing model (CAPM) can assist investors and researchers in evaluating the expected returns of assets by taking into account the effect of EPU on the market risk premium and the beta of individual equities (Sharpe, 1964). EMH posits that all available information is immediately reflected in asset prices. This implies that any changes in EPU, as a significant piece of information, should be quickly incorporated into stock prices. However, CAPM suggests that expected returns are determined by the risk-free rate plus a risk premium. EPU, as a systematic risk factor, can increase the market risk premium.

2.2 EPU and Stock Market

Using the methodology of Baker et al. (2016), Chaudhary et al. (2020) construed an EPU index based on the articles about the Economy (E), Policy (P), and Uncertainty (U) that were published in four significant Pakistani English newspapers (The News, Dawn, Business Recorder, and Express Tribune). This index is empirically used to assess the impact of economic policy uncertainty and its impact on stock market behaviour. Chiang (2020) defines this phenomenon as “Investors have an incentive to hedge against future stochastic shifts in consumption and investment opportunity sets”. Based on his study on Japanese stock market, increased EPU is likely to result in lower stock returns. Conversely, better stock returns are indicated by a favorable influence on the lagged values of EPU.

A rise in trade, fiscal, monetary, and global EPU concerns, as well as overall market uncertainty in Japan, is another manifestation of this phenomenon. This statement suggests a potential link between the Japanese and Pakistani economies, highlighting the interconnectedness of global economic factors. It implies that these factors can have a ripple-effect that extend beyond Japan and impact other economies, including Pakistan. Further analysis is required to establish a more concrete relationship and understand the specific channels through which these factors influence each other. There are inverse relationships between shifts in economic policy uncertainty and stock returns when asymmetrical impacts are tested for both upward and downward shifts in uncertainty. However, the level the asymmetry in fluctuations in EPU regarding stock returns from Japan’s local market surpasses that of the US market (Chiang, 2020). Similarly, Zhang et al. (2015) examined how EPU affected China’s capital structure choices.

2.3 EPU and Stock Returns

EPU’s asymmetrical connection to the stock market has broader implications for risk management and financial standing. In this regard, the main purpose is to ascertain the impact of EPU indices on the stock swap and to evaluate the relative importance of several important EPU indices (He and Li, 2020). Uncertainty regarding economic policy plays a significant part in enhancing the spillover effects throughout European regional markets (Hadhri, 2023). The substantial effect of EPU on stock markets are further supported by empirical data from the US Wang et al. (2020), Canada Killins et al. (2021), the increased spillover effect of EPU on stock market indices of the US, Asia Pacific and Latin America / China Wang et al. (2020), and stock market of G7 countries (Babaei).

In several past studies, increased uncertainty has been documented to exert a detrimental impact on stock returns (Arouri et al., 2016; Brogaard and Detzel, 2015). A few researchers investigated how the EPU affects the Bitcoin marketDemir et al. (2018); Phan et al. (2018), and discover that the EPU can forecast Bitcoin returns (Phan et al., 2018; Wang et al., 2019). Similar studies Hadhri (2023), further support a strong case for the viability of employing Bitcoin as a hedging strategy against EPU shocks in G7 economies (Izadi and Hassan, 2018).

Emphasis is placed on how unclear policies affect markets for stocks in (Pastor and Veronesi, 2012). They calculate the variance of policy changes as a measure of government policy uncertainty and discover that it has a detrimental effect on the US stock returns. There is additional empirical evidence supporting the unfavorable implications of policy uncertainty for stock markets in USA Arouri et al. (2016), China and India (Li and Zhong, 2020).

The spillover theory states that a person’s behavior, attitudes, feelings, and skills in one area have an impact on another, and vice versa. There may be benefits and drawbacks to these phenomena. Zhong and Jiang (2021) demonstrates that rising US interest rates sharply lower developing market’s output, resulting in bigger and long-lasting reductions. The results from other significant economies and stock markets, including those in Asia, Europe, and the United States, tend to be unfavorable and corroborate the earlier findings in GCC countries (Oman, Qatar, Saudi Arabia, Bahrain, Kuwait Batabyal and Killins (2021), in Canada Kapar et al. (2024) in China Saeed, and in Russia (Costola and Lorusso, 2022). Pakistan’s stock market volatility is better predicted by the US economic policy uncertainty index. Furthermore, the UK’s EPU index offers useful data for forecasting equities market volatility. The EPU indexes for China and Pakistan surprisingly lack any meaningful predictive data for volatility predictions across the study period. Finally, we discover evidence of all uncertainty indices during the COVID-19 pandemic’s economic turmoil. The same outcomes were attained even in Covid-19 by employing several evaluation techniques such as MCS tests and other predicting windows (Ghani and Ghani, 2024).

EPU and stock market performance in industrialized economies have been proven to be negatively correlated in prior research Baker et al. (2016). Less research has been conducted on the role of EPU in affecting developing markets like Pakistan. By investigating the effect of EPU on sectoral indices in Pakistan, this study seeks to close this gap. Furthermore, we use the ARDL and linear models to expand the modeling and offer additional inference about the possible unequal effects that EPU may have on both short- and long-term stock results. The theoretical model is presented in Figure 1.

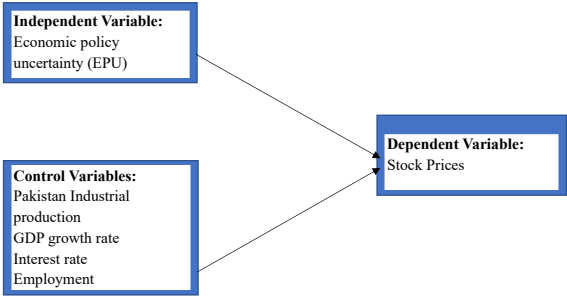


Figure 1:

2.4 Research Hypothesis

Based upon theoretical and empirical literature, research hypothesis is formulated that:
H₁: Economic policy uncertainty has a significant impact on stock market indices in Pakistan.

3 Methodology

3.1 Variable and Data

Bahmani-Oskooee and Saha (2019) created a monthly EPU index. In Pakistan, the newspaper-based EPU index was first-time developed by Chaudhary et al. (2020), who collected the information from prominent Pakistani newspapers, including The News, Dawn, Express Tribune, and Business Recorder. This study uses monthly data on EPU based on media coverage frequency, spanning from August 2010 to December 2023. The stock market returns were calculated using the monthly adjusted closing stock prices of composite indices of KSE100 and All Shares Islamic Index (KMIAS) traded on Pakistan Stock Exchange (PSX). According to the CAPM, an asset's returns should be correlated with its beta, or the covariance of the market's return (Jensen, 1972). Since EPU indicates a source of systematic risk, it is, therefore, related to stock returns. Table 1 provides the description, proxy and source of each selected variable.

Table 1: Variable Description and Data Sources

Variable	Acronym	Description	Source
Economic policy uncertainty	lnEPU	IV	www.epu index
KSE100	lnKSE100	DV	Investing.com
All Shares Islamic index (KMIAS)	lnALL_ISLAMIC	DV	Investing.com
Pakistan industrial production	PIP	CV	Pakistan Bureau of Statistics
GDP growth rate	GDP.G	CV	Pakistan Bureau of Statistics
Interest rate	IR	CV	State Bank of Pakistan
Employment	EMP	CV	Pakistan Bureau of Statistics

Note: IV, independent variable; DV, dependent variable; CV, control variable

The lnKSE100 represents the log value of stock market index, lnALL_ISLAMIC (KMIAS) indicates the log value of Shariah-based equity market index, PIP is an index of industrial production in Pakistan used to gauge overall economic activity, GDP-G is a measure of GDP growth rate, IR stands for interest rate, and EMP stands for employment. lnEPU (also expressed in natural log) is a specialized indicator of economic policy uncertainty for a given economy.

3.2 Econometric Model

$$\ln KSE_{100t} = \beta_0 + \beta_1 \ln EPU_t + \beta_2 PIP_t + \beta_3 GDP.G_t + \beta_4 IR_t + \beta_5 EMP_t + \mu_t \quad (1)$$

$$\ln ALL_ISLAMIC_t = \beta_0 + \beta_1 \ln EPU_t + \beta_2 PIP_t + \beta_3 GDP_G_t + \beta_4 IR_t + \beta_5 EMP_t + \mu_t \quad (2)$$

where in Eq 01

$\ln KSE100$ denotes the log of KSE100; $\ln ALL_ISLAMIC$ represent the log of all Islamic index; β_0 is constant; $\ln EPU$ express the economic policy uncertainty; PIP represent Pakistan industrial Production; GDP_G shows GDP of growth rate; IR express the interest rate; EMP represent employment. Following [Pesaran et al. \(2001\)](#), we formulate the model equations in ARDL form in order to evaluate the short-run and long-term effects in one step:

$$\begin{aligned} \Delta \ln KSE100_t = & \alpha + \phi_0 \ln KSE100_{t-1} + \phi_1 \ln EPU_{t-1} + \phi_2 PIP_{t-1} + \phi_3 (GDP - G)_{t-1} \\ & + \phi_4 IR_{t-1} + \phi_5 EMP_{t-1} \\ & + \sum_{m=1}^{s-1} \gamma_m \Delta \ln KSE100_{t-m} + \sum_{m=0}^{t-1} \pi_m \Delta \ln EPU_{t-m} + \sum_{m=0}^{t-1} \psi_m \Delta PIP_{t-m} \\ & + \sum_{m=0}^{t-1} \omega_m \Delta (GDP - G)_{t-m} + \sum_{m=0}^{t-1} \lambda_m \Delta IR_{t-m} + \sum_{m=0}^{t-1} \delta_m \Delta EMP_{t-m} + \mu_t \end{aligned} \quad (3)$$

$$\begin{aligned} \Delta \ln ALL_ISLAMIC_t = & \alpha + \phi_0 \ln ALL_ISLAMIC_{t-1} + \phi_1 \ln EPU_{t-1} + \phi_2 PIP_{t-1} \\ & + \phi_3 (GDP - G)_{t-1} + \phi_4 IR_{t-1} + \phi_5 EMP_{t-1} \\ & + \sum_{m=1}^{s-1} \gamma_m \Delta \ln KSE100_{t-m} + \sum_{m=0}^{t-1} \pi_m \Delta EPU_{t-m} + \sum_{m=0}^{t-1} \psi_m \Delta PIP_{t-m} \\ & + \sum_{m=0}^{t-1} \omega_m \Delta (GDP - G)_{t-m} + \sum_{m=0}^{t-1} \lambda_m \Delta IR_{t-m} + \sum_{m=0}^{t-1} \delta_m \Delta EMP_{t-m} + \mu_t \end{aligned} \quad (4)$$

To account for a variety of business cycles and economic events, the current study has used several additional macroeconomic factors which include composite Pakistan industrial production, GDP growth rate, interest rate, employment, as specified in Appendix 1 during the sample period. The summary statistics for the variables in the study are displayed in Table 2.

Table 2: Summary Statistics

Variables	Obs.	Mean	SD	Min	Max
$\ln EPU$	161	4.486	0.475	3.334	5.791
$\ln KSE100$	161	10.326	0.473	9.191	11.042
$\ln ALL_ISLAMIC$	91	9.924	0.135	9.519	10.33
PIP	161	3.698	10.992	-45.64	73.65
GDP_G	161	3.54	1.596	-0.94	6.17
IR	161	10.177	4.205	5.75	22
EMP	161	24.097	1.223	21.622	26.052

Note: Obs. Indicates observations; SD stands for standard deviation

4 Results and Discussions

The current research applies the Augmented Dickey Fuller (ADF) and Philips-Perron (PP) tests to determine the unit root of the non-stationary time series. Both the ADF and PP tests exhibit robustness against unit root heteroscedasticity. Table 3 displays the results of both ADF and PP unit-root tests for each variable at level and first-difference. All variables become stationary at first difference except employment (which is stationary at level). Therefore, the selected variables have either I(1) and I(0) order of integration which further warrants the application of ARDL model (Pesaran et al., 2001).

Table 3: Unit Root Testing Results

	ADF test statistic		PP test statistic		Order of integration
	Level	FD	Level	FD	
lnEPU	-1.49	-8.754***	-4.961***	-45.623***	I(1)
	-0.53	0	0	-0.001	
lnKSE100	-1.93	12.471***	-1.949	-12.471***	I(1)
	-0.32	0	-0.308	0	
lnALL.ISLAMIC	-1.42	-8.770***	-1.671	-8.770***	I(1)
	-0.57	0	-0.442	0	
PIP	-5.51	-9.795***	-5.582***	-24.985***	I(1)
	0	0	0	0	
GDP -G	-4.52	-2.893**	-2.528	-3.133**	I(1)
	0	-0.048	-0.11	-0.026	
IR	-1.74	-4.700***	-273	-14.813***	I(1)
	-0.41	-0.001	-0.924	0	
EMP	-1.18	-3.233**	-1.287	-3.515***	I(0)
	-0.68	-0.019	-0.634	-0.008	

Note: *, ** and *** indicate 10%, 5% and 1% level of significance, respectively.

Before investigating a long-run relationship between selected variables, it is imperative to determine the lag order of variables. The augmented VAR tool facilitates the selection of relevant lags for the estimate procedure. Information about Akaike two lags is suitable for additional estimation, according to the Philips-Perron (PP) criterion and the AIC. The long-term association is then established using ARDL Bounds testing, the results of which are displayed in Table 4, reveal long-run co-movement of the country's EPU ratings with its stock performance during the study period from August 2010 to December 2023. Bounds test values of lnKSE100 (3.530) and lnALL.ISLAMIC (3.730) are compared with lower and upper bound value, which are higher than upper bound (3.15) and (3). Table 4 displays the ARDL results, which establish the long-term relationships between the variables.

Table 4: ARDL Bounds Testing for Cointegration

	lnKSE100		lnALL-ISLAMIC	
F-statistic	3.530		3.730	
Significance	I0 Bound	I1 Bound	I0 Bound	I1 Bound
10%	2.3	3.15	2.08	3
5%	2.55	3.6	2.39	3.38
1%	3.35	4.58	3.06	4.15

We use the boundaries test to see if there is a persistent link between the elements. The absence of a long-term link, or cointegration, is stated as the null hypothesis. The test statistic is compared with the critical values (Pesaran et al., 2001). Since the test statistic is significant, it is possible to determine cointegration with certainty outside of the critical value constraints. The model's long-run coefficients are displayed in this section. The coefficients show how each variable affects lnKSE100 over the long run. The results of a cointegration test, which uses the autoregressive distributed lag (ARDL), are shown in Table 5. The test examines the long-term association between the dependent variable (lnKSE100) and a group of independent factors. As illustrated, an increase of one percent in EPU is linked to a negative 0.428 percent long-term drop in lnKSE100. Economic policy uncertainty has a negative significant effect on stock index at 10% level of significance. The results imply that the higher level of EPU negatively influences stock market returns in the long run. These findings are aligned with the prior studies that have also reported the adverse effect of EPU on stock returns (Arouri et al., 2016; Batabyal and Killins, 2021; Christou et al., 2017; Kumar et al., 2023).

Table 5: ARDL Long-Run- lnKSE100

Variable	Coefficient	S. Error	T-Statistic	P-value
lnEPU	-0.428	0.229	-1.864	0.064
PIP	-0.008	0.008	-0.988	0.324
GDP_G	-0.017	0.073	-0.243	0.808
IR_	0.016	0.029	0.538	0.59
EMP	0.374	0.066	5.598	0
C	3.298	1.544	2.135	0.034

Given that the coefficient of employment is 0.374, a one-unit increase in employment is anticipated to cause a rise of 0.374 in lnKSE100 over the long term. Employment rate has positive significant effect on stock returns at 5% critical value. It implies that higher level of employment in the economy positively influences the stock market performance in Pakistan. The rate at which the equilibrium over the long term is being adjusted is indicated by the error-correction term (ECT). The variables have a long-term association, as indicated by the significant and negative coefficient of ECT (-1) in Table 6. It also measures the speed of adjustment at which long-run

equilibrium is restored. ECT has a negative coefficient of 0.043 which implies that 4.3% variation in previous month is adjusted in current period and indicates a relatively slow process of recovery in Pakistani stock market.

The short-run relationships between independent variables and stock returns are also depicted in Table 6. The results report that EPU and industrial production index (PIP) has a negative significant effect on stock market performance at 10% critical level. On the other hand, change in GDP growth rate positively affects stock returns, and lag-effect of change in employment rate negatively influences stock returns in Pakistan. To summarize, the findings of the ARDL limits test indicate that lnKSE100 and the collection of independent variables may maintain a long-term stable relationship. The long-run coefficients and short-run dynamics shed light on the key relationships between the selected variables.

Table 6: ARDL Short-Run Form-lnKSE100

Variable	Coefficient	S. Error	T-Statistic	P-value
C	0.165	0.108	1.524	0.129
lnKSE100(t-1)	-0.043	0.031	-1.381	0.169
lnEPU	-0.024	0.014	-1.749	0.082
PIP	-0.001	0	-1.9	0.059
IR	0.001	0.001	0.93	0.353
Δ GDP_G	0.218	0.054	4.019	0
Δ EMPT-1	-0.824	0.305	-2.702	0.007
ECT	-0.043	0.011	-3.905	0

Table 7 presents the long-term effects of each explanatory variable on lnALL_ISLAMIC, as displayed by the respective coefficients. For example, the EPU coefficient is -0.152, meaning that a one percent increase in EPU is associated with a long-run decrease in lnALL_ISLAMIC of 0.152 percent. EPU negatively affects stock market performance at 5% critical level. The results imply that increased uncertainty in economy policy has a determinantal effect on Islamic stock index. These findings are supported by previous studies that have also documented the negative effect of EPU on stock returns (Hammoudeh et al., 2016; Li and Zhong, 2020). The coefficient of GDP_G is 0.077, suggesting that a one-unit increase in GDP_G relates to a long-term surge in lnALL_ISLAMIC by 7.7 percent. Similarly, a one-percentage point increase in interest rate leads to 3.1 percent rise in Islamic stock index. The results of long-run ARDL form report the positive and significant effect of GDP growth rate and interest rate on Islamic stock returns. ECT term in ARDL model measures the rate at which the long-run equilibrium is being adjusted in a month. It is evident from the negative and significant coefficient of ECT (-1) that the variables have a long-term association. The coefficient of -0.371 shows that roughly 37.1% disequilibrium in the prior period is restored in the current period which indicates a relatively quick speed of recovery.

Table 8 displays the findings of a cointegration limits test that makes use of the autoregressive distributed lag (ARDL). The short-run dynamics are explained between a group of independent factors and the dependent variable, lnALL_ISLAMIC. In the short-run, EPU has a negative and statistically significant effect, while interest rate and GDP growth have positively significant

Table 7: ARDL Long-Run Form-InALL_ISLAMIC

Variable	Coefficient	S. Error	T-Statistic	P-value
lnEPU	-0.152	0.073	-2.06	0.042
PIP	0	0.005	-0.571	0.569
GDP_G	0.077	0.018	4.253	0.001
IR_	0.031	0.008	3.64	0
EMP	0.055	0.064	0.863	0.39
C	8.673	1.345	6.446	0

effects on stock returns at 5% critical level, respectively. Moreover, the lag-value of All Islamic Index (Sharia-based stock index) negatively influences its contemporaneous values; it implies that past variations in stock index have a mean-reversion phenomenon and indicates partial correction to long-run stability over the time.

Table 8: ARDL Short-Run Form- lnALL_ISLAMIC

Variable	Coefficient	S. Error	T-Statistic	P-value.
C	3.219	0.926	3.474	0
lnALL_ISLAMICt-1	-0.371	0.085	-4.343	0
lnEPU	-0.056	0.027	-2.074	0.041
PIP	0	0	-0.588	0.557
IR	0.011	0.003	3.25	0.001
EMP	0.02	0.023	0.864	0.39
Δ GDP_G	0.164	0.042	3.854	0
ECT	-0.371	0.07	-5.3	0

The results of diagnostic tests for the lnKSE100 and lnALL_ISLAMIC models are shown in Table 9. It displays the findings of numerous diagnostic tests conducted on the selected model including the Ramsey RESET test for functional forms specification, the Jarque-Bera normalcy test, the Breusch-Pagan test for heteroscedasticity, and the Breusch-Godfrey (serial autocorrelation LM test) test. The findings indicate that the residuals are not functionally misspecified, independent, homoscedastic, and normally distributed; both models pass the diagnostic tests.

As an alternative, the stability of the ARDL calculated model at the 5% significant level is justified by the fact that both CUSMUS lines are inside the bounds of the CUSUM and CUSUM squared plots, respectively (See Appendix 1 (a, b, c, d) at the end).

Table 9: Diagnostic Test

Specification	lnKSE100	lnALL ISLAMIC
Breusch-Godfrey (Serial Correlation LM Test)	1.3	0.723
	-0.267	-0.607
Breusch-Pagan-Godfrey (Heteroscedasticity)	1.02	0.85
	-0.441	-0.59
Jarque-Bera (Normality)	0.05	1.188
	-0.974	-0.551
Ramsey Reset Test	0.179	0.013
	-0.857	-0.906

Note: Numbers in parenthesis are corresponding p-values

5 Conclusion

This study investigates that how EPU affects stock markets in Pakistan over the period from August 2010 to Dec 2023 and discloses a significantly negative impact on the indexes of the Pakistani stock market. Market agents are aware of the significance of accurately anticipating swings in stock returns, and they actively seek this goal. The impact of uncertain economic policies on stock returns has received much attention recently due to various reasons. These elements include the financial industry's current reliance on forward advice from governmental organizations, coupled with the complexity of monetary and fiscal policy, that has grown over the previous years. This forward advice covers fiscal and regulatory policies in addition to monetary policy. Expectations are set and stakeholders are involved in ex ante guidance from multiple governmental authorities as a business norm. Periodically, these expectations are retuned, yet investors' risk tolerance may be impacted by uncertainty that permeates the asset markets when it leads to a deadlock in the course and application of economic policy actions and hence, costs. Additional empirical data from this study support the idea that Pakistani stock prices are impacted by uncertainty in economic policy. Furthermore, by using ARDL model, for both lnKSE100 and lnALL ISLAMIC, the current study extends the existing body of literature on stock markets and EPU. This modelling technique clarifies the potential uneven effects and timing of EPU on stock market returns.

Findings indicates that: (a) the returns of the Pakistani stock market and EPU are significantly correlated. It is confirmed by the ARDL and baseline models. The effect is typically detrimental, confirming earlier findings from other key stock markets major economies, including those in Europe, Asia, and the United States. (b) our ARDL model indicates that EPU's immediate and long-term consequences are largely absorbed by the stock markets. Over time, investors shift their holdings from hazardous to safe-haven investments, including cash, gold, defensive stocks, high-grade bonds, and Treasury securities when perceived market uncertainty increases. As though these assets safeguard portfolios from the downside in difficult times, thus returns are not anticipated to be very high. To increase the possibility of better returns, investors are willing to, when market uncertainty fades, swap out commodities, equities, bonds with high

yields and other investments that put the low-return and safe-haven investment portfolios at risk.

Future research should consider extending the time-series beyond the current study. It can examine the impact of EPU on specific sectors of the Pakistani economy, such as agriculture, manufacturing, and services. The researchers can also study the differential effects of EPU on stock prices in various regional locations, accounting for disparities in investor behavior, market access, and economic conditions. They can further evaluate the degree to which international variables, such as economic downturns or geopolitical developments, affect Pakistan's link between EPU and SP. They can also examine the effect of EPU on the stock values of Pakistan in comparison with other neighboring Asian economies including Bangladesh, Sri Lanka, and India.

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