

PAKISTAN'S POLITICAL ECONOMY AND STOCK MARKET RETURNS

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ABSTRACT

The objective of this research is to find out the effect of uncertain political events on the Pakistan Stock exchange (KMI 30 & KSE 30) from 2012 to 2019. This study examines how uncertain political events affect Pakistan's stock market using mean adjusted return models and event study methods. The findings of the study show that the Islamic stock market is significant at 5 events and conventional market is significant at 6 events out of 21 events. Both markets responded events count have a minor difference. Islamic market is more intense in response to political events; its significance level is high in responses. The findings of the study show that both markets are inefficient for short timeframe, after nearly 15 days, they absorb the noisy data and begins normalizing. The research contributes to the literature by proving that KSE 30 is less effective than KMI 30, as conventional markets respond more to different uncertain political events than Islamic markets. This research study is expected to make a significant contribution, especially in the Pakistan capital market literature as in this study researchers incorporate multiple political events and its impact on different stock markets performance. Further research may examine differences in the response of the KSE and other Pakistani stock exchanges (such as Lahore and Islamabad) to Pakistani political events.

Keywords: KSE 30, KMI 30, Abnormal Returns, Political Events, Stock Markets of Pakistan.

INTRODUCTION

Every country's economy has an important measure of its financial markets; the country's financial health for the economy is seen by its consistency and performance. Financial markets have a major role in stock markets. The role of Stock markets is very critical in the growth of the industrial sector of state by giving an ideal network of resources between customers and providers of resources. The growth of the shares market is very quick in reaction to events. It is really hard to forecast share market fluctuation while the consistent stock market is studied carefully as the most significant portion of the states' economy. National stock markets are affected by political risk it's a worldwide phenomenon far away from the twentieth era. The economic literature is filled with a number of studies on a subject related to stock markets influenced by political events. Fama (1969) provides a theory of the efficient market hypothesis on efficiency. According to this theory, "A market is considered efficient when it perfectly reacts to the information and indicates fluctuation in its prices". Political events are not directly related to the stock market but are considered to be one of the main factors that can affect the stock market.

According to Manzoor (2013), the political system can be stable when the economy is not facing any crisis due to internal conflicts. Stable political conditions attract investors to invest

because investors feel safe to invest in less risky markets and where economic conditions are stable. Recession in the economy of a country results in political instability. Political instability is too high in the Pakistan market. However, the larger number of political events is occurring after one another and the market is unpredictable. As a result, the investor feels difficulties in predicting market behavior and in investing decisions. Investors also face difficulties to understand which market is more volatile in nature on occurring of the number of events one after other and which market is low in the volatility of returns, safe to invest in Pakistan.

Many studies considered the events of elections, CPEC economic corridor and Indian airstrikes (Ahmad et al., 2017), (Saeed Rehman et al., 2018) and (Nazir et al., 2018) but there is a significant gap that comparative study is not conducted in context of Pakistan, describe which market is more reactionary in a same political event.

This study will help the researchers as well as policymakers to develop the understandings of market fluctuations and returns volatility in an uncertain political environment. This research will support Islamic and conventional investors. The study looked at which market was the most reactionary in the context of political instability, and which investment strategies in that market were most beneficial to investors. The study of differentiation in markets in political conditions will contribute to existing literature. This article will discuss respectively literature review, methodology, results, discussion, and conclusion.

Research Objective

1. To examine the effect of different political events on Pakistan Sharia KMI 30 and conventional stock market KSE 30.
2. To examine the stock market for different reactions to the same political event.

LITERATURE REVIEW

The Efficient Market Hypothesis

As suggested by Fama (1965) and Malkiel (2003), the efficient market hypothesis is related to the notion that influences Random walk theory. A major issue with pricing of information, as seen in many events that have occurred during the recent sovereign and financial debt crises, is no one can predict the impact of the information, especially under uncertainty. As Fama (1965) points out, equilibrium prices cannot be accurately determined during uncertain times. Somehow news has a high effect on stock costs. However, distinguishing news can hit the business sectors even before they are formally public or known. Event is unpredictable; an unexpected event can cause market reactions and abnormal returns. In an event window, there shall be no correlated events existing. Uncertain events create pressure and stress in the market when the market is unable to perform rationally in the estimation of the event. In an Inefficient market, the share prices are predictable to react differently as long as individual firms are affected on their financial basis differently by recent news

Empirical Studies

Chau et al., (2014) studied the impact of political possibilities (caused by going up in the Arab world) on the irregularities of huge financial transactions by controlling U.S. trade versus conventional and Islamic financial transactions in the region. The results indicate that the two

investors groups reacted differently to the current political situation in the Middle East and North Africa.

The efficient market hypothesis (EMH) shows that markets are rational and reflect all information. This means that no investor can beat the market by creating extraordinary returns. However, we see the stock market deviate (abnormal) and contradict EMH rules. To investigate this issue (Nazir et al., 2018) in event study considered political and terrorist events. A comparative study seeks to find out whether political and terrorist incidents have affected stock market returns in financial markets in South Asian countries? Empirical results showed that political and terrorist events have a significant impact on stock market returns. In addition, the results showed that during the 15-day window of activity, the stock markets of South Asian countries were inefficient. The noisy information that the market does not absorb contradicts the assumption of the efficient market hypothesis (EMH).

Batool et al. (2017) conducted a research to examine the effect of religious events (Islamic and non-Islamic) on the day to day returns of PSX. The results show that the Average Abnormal Return (AABR) and Cumulative Average Abnormal Return (CAR) in the proposed window are shown both negative and positive effects on PSX. The results showed that the behavior of the Pakistan Stock Exchange was inefficient during different religious events.

Abdul Latif et al. (2017) studied the impact of political and disaster events (Natural fiascos) on the stock return of PSX. The results of this study showed that the average rate of return increases when political events occur over a period of five days window. Political events affected returns on equity, but they no longer lasted, and the returns returned to normal shortly thereafter. As a result, ideal political events affect stock returns for only five days window.

Khan et al., (2017) also studied on Pakistan stock exchange manipulation in times of general elections. Manipulation of the stock indices is always a doubtful dialogue for investors and policymakers. The study applied Event study methodology to the KSE 100 indices to check the manipulation of indices. Three election periods 2002, 2008 and 2013 are taken as 3 events for the study. The results show that the first two events in 2002 and 2008 had a negative impact on the stock market, while the third event had a positive impact on PSX.

Rehman et al. (2018) studied the effect of ongoing super events which include a break of Panama papers, CPEC and Surgical Strike on stock returns of openly recorded firms of China, Pakistan, India, Saudi Arabia, US, and UK. The results of the study showed that stock returns of certain nations react altogether to a portion of these events and a few events don't have any critical relationship with stock returns.

METHODOLOGY

This research is based on quantitative research methods and uses positivist research concepts. A research unit of analysis is Karachi stock market KMI 30 and KSE 30. The sample involves Islamic and conventional markets. The study included samples of 1,750 daily Islamic and conventional stock price indices. Analytical data for two Pakistani markets start from June 2012 to April 2019.

Event Study

The empirical literature states that event methodologies are the best way to study certain events (MacKinlay, 1997). Brown & Warner (1985) supported that event methodology is best for studying certain events. Henderson (1990) also supports event research and suggests that market

models for event research are more suitable for allocating specific events. Previously researched uses the methodology of events to measure the effect of events through political connections by using 21 events to study market behavior (Janssen, 2014). These events are selected by well-known newspapers such as Dawn News, BBC News, and CNN News. The study uses mean adjusted returns to estimate expected and normal returns. It is to be concluded that it is an effective method to analyze market reaction and trend (Table 1).

Event Description

Sr no.	Date	Event Description
1	4-Jul-12	NATO's supply courses in Afghanistan has reopened by Pakistan.
2	9-Oct-12	Malala Yousafzai attacked by Taliban
3	14-Jan-13	Governor rule was imposed in Baluchistan as the Baluchistan government was dismissed.
4	18-Feb-13	One billion-dollar contract with China to establish Gawadar Port contract
5	11-Mar-13	Inauguration of construction of 7.5 billion gas pipelines from Iran to Pakistan by Asif Zardari and Iranian President Mohammad Ahmed Naiad officially
6	19-May-13	Election held Nawaz Sharif wins with a majority of votes
7	8-Jun-14	Dozens killed in a deadly attack at Karachi International Airport
8	14-Aug-14	PTI protest against PMLN because of rigging in the 2013 general elections
9	16-Dec-14	APS attack in Peshawar
10	20-Apr-15	China and Pakistan sign agreement to strengthen infrastructure to cure Pakistan's long-term energy crisis.
11	25-Dec-15	Narendra Modi visits Pakistan unexpectedly to meet Nawaz Sharif
12	27-Mar-16	Easter suicide bomber in Iqbal Park, Lahore
13	24-Oct-16	Activists attack police training school in Quetta
14	29-Nov-16	General Qamar Javed Bajwa appointed as new Minister of Defense
15	28-Jul-17	Sharif resigned as prime minister after the Supreme Court announced that he could not continue in office on charges of corruption.
16	1-Aug-17	Shahid Khaqan Abbasi selects Prime Minister to take over Nawaz Sharif Palace
17	6-Jul-18	Sharif, his daughter, and son in law jailed
18	25-Jul-18	PTI wins election
19	17-Feb-19	Crown Prince Mohammed bin Salman visits Pakistan with 800 investors to sign multi-billion dollar economic development contract
20	27-Feb-19	Indian fighter jets crossed the line of control and downed by PAF.
21	26-Mar-19	The Supreme Court ordered the release of Nawaz Sharif from prison for treatment.

Model Estimation

The model measures the indexes' expected to return as a constant R^* . In this formula, T denotes the number of days in the event window, and t is the market record returned on the t day of the event window. The abnormal return on the market list is the comparison between the actual profit and the expected profit in a particular period.

$$AR_t = R_t - R^*$$

AR_t is the abnormal return rate or expected error of the market file on the t day of the event window,

R_t returns to the market record on the t-th day of the event window, and

R^* Expected return on market records at event window time T.

The study also determined the average abnormal return at the time of the event, as indicated two, five, and fifteen days before the event.

$$\begin{aligned} AR^*_{before} &= \\ AR^*_{after} &= \end{aligned}$$

Where K is the number of days before and after the event, and AR * before the average abnormal return before and after the event. The standard deviation of the average abnormal return on the day of the event.

In addition, the total standard error of the differences between the sampling means is determined in order to test the differences between the means. The consolidated standard error equation for the difference in means is as follows:

$$\sigma_{pre-post} = \sqrt{\frac{(n_1 - 1)\sigma_1^2 + (n_2 - 1)\sigma_2^2}{n_1 + n_2 - 1}} - \left(\frac{1}{n_1} + \frac{1}{n_2}\right)$$

Where, σ_1^2 is the difference of pre-event period; σ_2^2 the difference of post-event period; and n_1 , n_2 the number of days in pre and post-event period. The statistical t-test is used to break down the difference between the average value of abnormal market returns before and after the event. If we look at three event windows, this is the difference between the average of two, five, and fifteen days of market abnormal returns in the event. The detailed equation t is shown below

$$t = \frac{AR^*_{after} - AR^*_{before}}{\sigma_{pre-post}}$$

The statistical t-test is used to break down the difference between the average value of abnormal market returns before and after the event. If we look at three event windows, this is the difference between the average of two, five, and fifteen days of market abnormal returns in the event. The detailed equation t is shown below

At this point, the estimation of t-measurement is significant, researchers consider the market to be invalid as it does not contain any uncertain information; if measure t seems to have insignificant results, it retains noisy information and EMH is valid. The study used three occasion windows of 2-day, 5-day, and 15-day to examine how long it took the market to absorb uncertain information.

RESULTS AND DISCUSSION

On July 14, 2012, NATO's supply courses in Afghanistan has reopened by Pakistan. The first level of event window does not affect significantly from this event. However, after fifteen days window, both markets react positively to this event. On October 9, 2012, the Taliban attacked a 14-year-old girl, Malala youfazai. The Pakistani market reacted not significantly but considered it as an overall negative event.

On January 14, 2013, governor rule was imposed in Baluchistan as the Baluchistan government was dismissed. Both markets are not affected significantly after the event but markets showed positive reactions to the 15-day event window after the event and negative reaction to the 15-day event window before the event.

As of February 18, 2013, Pakistan signed one-billion-dollar contract with China to establish Gawadar Port. It is hoped that the development of this port will bring new development to Pakistan, especially Baluchistan prospects. Fifteen days before the event, abnormal market returns in Islamic and Conventional markets showed a positive trend, although the results at all event window levels in both markets were not statistically significant.

On March 11, 2013, Pakistani President and Iranian President officially inaugurated construction works of US \$ 7.5 billion Iranian natural gas pipeline. The event is not statistically significant. KMI30 before 15 days event window showed a highly negative trend but after 15 days window showed positive and abnormal returns. Islamic market reacts to negative trends before 15 days and a positive return after 15 days event window.

On May 19, 2013, Nawaz Sharif wins the election with a majority of votes. 2-days event window showed that after that event Islamic and conventional markets react significantly. Conventional Market showed positive abnormal return before fifteen days event window and negative after 15 days. It shows that the overall market reacts negatively to this event. Islamic Market showed abnormal and positive trends before 15 days and a negative trend after 15 days. Khan, et al., (2017) research on that particular event. The findings of this research show that the 2013 election had a significant positive impact on the stock market. This study also shows a significant impact on KSE 30 and positive market trends.

On June 8, 2014, ten people were killed in a deadly attack at Karachi International Airport, and ten armed men attacked Kinaki International Airport with automatic weapons, rocket launchers, suicide vests and grenades. The reaction of the two markets to the event window is not significant, but after fifteen days event window showed abnormal return and negative trend.

PTI protest against PMLN because of rigging in 2013 general elections from August 14 to December 17, 2014. The march was organized by the Pakistan Tehreek-e-Insaf (PTI) political party. KMI 30 responded insignificant to the two-day event window, while KSE30 responded highly significant to this. The unusual returns in both markets show a positive trend. Ahmad et al. (2017) studied the response of the KSE 100 stock market to PTI march. The findings state that the market responds to significant and negative abnormal trends. KMI 30 did not show any significant effects, but KSE 30 was positive in the 2-day event window.

On December 16, 2014, six-shooters of Pakistan's Tehrik-I-Taliban (TTP) sniper launched a radical psychological attack on an army public school in Peshawar. The attackers were foreigners, including Chechens, three Arabs, and two Afghans. They entered the school and opened fire on school staff and children. 149 people were executed, including 132 schoolchildren aged between 8 to 18 years, the fourth fatal attack in the world. The response of KMI30 was significant and abnormal returns were a negative trend. KSE 30's response to the 2 and 5 days of the event window was very significant. Rehman et al. (2018) studied that the Peshawar attack had a significant impact on the KSE 30 stock market. The market showed abnormal returns and negative trends. This confirms these results from the KSE 30 study, which also showed significant effects of 2-day event windows and negative abnormal returns. KMI 30 has shown that the incident has had an insignificant impact on abnormal market returns and has shown a negative trend.

On April 20, 2015, China and Pakistan sign agreement to strengthen infrastructure to cure Pakistan's long-term energy crisis. Overall KMI30 and KSE30 react insignificant to this event but

before this event, fifteen days event window showed positive reaction and negative trend after 15 days event window. Prime Minister Narendra Modi visited Pakistan unexpectedly. This is the main visit by the Indian Prime Minister to Pakistan since 2004. Both markets react positively after this event although it's an irrelevant event for the market.

On March 27, 2016, a suicide bomber blast at an outdoor park in Lahore on Easter night. As many as 69 people were killed and about 300 were injured. The incident was essentially irrelevant, but after the incident, the abnormal market return of KSE30 showed a negative trend, and KMI30 did not change. On October 24, 2016, three terrorists carrying high-intensity equipment attacked police training camp in Baluchistan Province, Quetta, Pakistan, killing 61 trainees and injuring more than 165. The markets showed insignificant but negatively abnormal returns trend after the event.

On November 29, 2016, new army chief took over the post. The markets showed insignificant and normal market returns show a positive trend. On July 28, 2017, Sharif left the prime minister seat after the court ruled that he could not continue in office due to corruption allegations. Both markets significantly responded to the two-day event window. The markets react abnormal returns and negative trends to this event. Shahid Khaqan Abbasi selects Prime Minister to take over Nawaz Sharif Palace. Both markets showed a significant but negative trend for this event.

On July 6, 2018, a Pakistani court sentenced former Pakistani Prime Minister Nawaz Sharif to 10 years in prison for a corruption case and a fine of 8 million pounds, including the purchase of four luxury apartments at Avenue Field House. Both markets showed an insignificant reaction to this event but before 15 days event window showed negative returns and positive returns 15 days after the event.

On July 25, 2018, PTI won a general decision, and a few days later, former cricket player Imran Khan Niazi was chosen as a prime minister of Pakistan. Both the KMI30 and KSE30 markets with a two-day active window are statistically significant. In the days before and after the first two windows, both markets achieved unusually positive returns. Melida et al. (2015) found that the presidential election has a significant impact on abnormal returns. This research is also supported by previous research.

Crown Prince Mohammed bin Salman visits Pakistan with 800 investors to sign a multi-billion-dollar economic development contract on February 17, 2019. KSE30 reacts significantly at all levels of the event window and it also shows a negative trend 15 days after the event and a positive trend 15 days before the event. KMI 30 shows abnormal returns and negative trends.

On February 27, 2019, Indian fighter jets crossed the line of control and downed by PAF. KMI 30 was shown a statistically significant effect on this event. KSE 30 is significantly affected in the two-day event window, and KMI30's abnormal rate of return shows a negative trend. Before the incident, the abnormal return of KSE 30 showed a negative trend. Rehman, et al., (2018) showed that such type of events is significantly impacting on the stock exchange.

Summary of Analysis

This part summarizes the investigation which has been clarified previously. Tables demonstrate the event's impact on both financial exchanges. Islamic market has absolute five critical events out of twenty-one events and the conventional market has six events impact out of twenty-one events. Five events of KSE 30 are significant at a short time range while one event Nawaz Sharif release is critical at 15 days event impact. Five events of KMI 30 is critical at short

time range while only one event Indian fighter planes downed by PAF is significant at all dimension of event window short just as lengthy time-frame window.

Differentiation of Stock Markets (KMI 30 & KSE 30) Reactions

The findings of the study showed that the stock markets of Pakistan are inefficient to absorb noisy information after this Differentiation of the responded events in numbers and market position before political events are explained by Table 2.

	Event windows		
	2 days	5 days	15 days
Stock markets			
KSE 30 event no.	6*,8*,9**,15*,18*20**	9*	21*
KMI 30 event no.	6**,15*,18*19***,20***	20***	20***

***, **, * significant at 1%, 5%, 10% levels, respectively.

The table shows the market's reactions to the uncertainty of the political environment. KSE 30 is significant at 6 events at the short time frame, one event at 5 days event window and one event at 15 days' time frame level of windows. KMI 30 has significant at 5 events at 2 days' timeframe, one event at 5 days and one at 15 days' time frame. Both markets responded events count have a minor difference. The table shows the significant intensity of the market reaction to political events. KMI 30 is more intense in response to political events. The significance level is high in responses of KMI 30. It shows that KMI 30 responds to fewer events, on the other hand, if the market responds to events then intensity is very high.

The study compares the market returns of KSE 30 and KMI 30 (Tables 3 & 4). Results showed that there is no difference in the mean market returns before the political events in both markets KMI 30 and KSE 30, but there is a difference in response intensity of the market. This One-way ANOVA test is run to compare the market situation before every political event, following the procedure of (Sajid Nazir et al., 2014).

Results showed that there is a difference in the reaction of stock market reactions. However, the study rejects the second H_0 of the study in favor of the alternate hypothesis.

Market returns	Sum of square	Df	Mean square	F	Significance
Between R of KSE30	2.2733436	1698	0.00133884	6.02	0.3164
Within R of KSE30	0.00022242	1	0.00022242		

Market returns	Sum of square	Df	Mean square	F	Significance
Between R of KMI30	0.18345934	1696	0.00010817	4.93	0.1055
Within R of KMI30	0.00006582	3	0.00002194		

CONCLUSION

This study examines how uncertain political events affect Pakistan's stock market using mean adjusted return models and event methods. Islamic stock market is significant at 5 events and the conventional market is significant at 6 events out of 21 events. Both markets responded events count have a minor difference. Islamic market is more intense in response to political events; its significance level is high in responses. Based on the results, it tends to be concluded that both markets are inefficient for a short timeframe, after nearly 15 days, they absorb the noisy data and begin normalizing.

The study contributed to literature that KSE 30 is more inefficient than KMI30 because the conventional market responded more to the event than Islamic. The study compares the market returns of KSE 30 and KMI 30. Results showed that there is no difference in the mean market returns before the political events in both markets KMI 30 and KSE 30, but there is a difference in response intensity of the market.

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