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Research paper

The Effect of Political Elections on Stock Market Volatility in Malaysia

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Abstract

During the past general elections held in Malaysia, empirical evidence showed a significant election effect in stock volatility. In this study, we investigate the influence of election on Malaysian stock market during the 12th and 13th general election where political tensions persisted due to the close fight between the two major parties. The findings indicate that the political uncertainty surrounding elections significantly affected investors respond. Results from statistical analysis uncover significant higher stock volatility in the pre-general election periods. Nevertheless, lower stock volatility is only found in two stock indices in the post-general election periods. By using the EGARCH model, a significant election effect is found in stock volatility but not in stock returns. Notably, political uncertainty showed up its significant role in influencing the stock volatility prior to the general elections in the year 2008 and 2013. Furthermore, lower stock volatility is found in the Shariah-compliant indices and stock index with greater market capitalization. Our findings have important implications for investors who are exposed to volatility risk. Investors may shift to large company stock and Shariah-compliant stock during the general election period. Investors should also be cautious because the high volatility is not compensated with a significant abnormal return.

***Keywords**: Malaysian Stock Market; General Election; Stock Market Volatility*

1. Introduction

The political business cycle postulated by Nordhaus (1) is well-accepted by academics for decades. Generally, academics believe that the performance of an economy is closely influenced by government policies. In the study, Nordhaus (1) showed that the pattern government policies are predictable during a term of office. In order to gain voters support, the decision made by incumbent political parties is biased against voters' need. Moreover, the emotional factor possibly biases the voters' decision-making around election period and this is supported by the risk-as-feelings model of Loewenstein, Hsee, Weber, & Welch (2). The risk-as-feelings model revealed that a person feelings can be affected by cognitive evaluations to produce a behavioral response and this explains why the emotion of voters is crucial in determining the winning of a party in an election. Hence, it explains the observed political elections effect on economic performance.
On the other hand, the stock market is viewed as an indicator of the economy. Based on the theory of wealth effect, Pearce (3) argued that fluctuations in stock prices have a direct effect on aggregate spending, and therefore predict the economy. Hence, this study analyzes the stock market response during the election period to evaluate the political election effect on the economic performance. In the literature, there has been a constant stream of work analyzing the impact of the political factor on stock market performance. Empirical evidence suggests that stock market is significantly affected by the election. In developed countries, election effect in the stock market is shown by a number of studies, among others are Peel & Pope (4), Gemmill (5), Lobo (6), Nippani and Arize (7) and Wong and McAleer (8). However, not many studies have been done in the emerging market, except Wang and Lin (9) on Taiwanese stock market, Lean (10) and Lean and Yeap (11) on Malaysian stock market.
Political election effect on stock market performance is mainly due to investors' expectation (12). Whenever investors are optimistic about the future of the economy, they are more inclined to invest in stock market. On the contrary, whenever investors feel unsecured with the future or policy of the country, they are more likely to withdraw from the market. Specifically, in the pre-election periods, general public and investors may be affected by the election campaign rhetoric and the promises made by the candidates, which can cause dramatic changes in stock prices. On the other hand, post-election shock can be caused by several factors such as a narrow margin of victory, lack of compulsory voting laws, change in the political orientation of the government, or the failure to form a government with parliamentary majority significantly.
During the past general elections held in Malaysia, evidence from the previous study showed there was significant election effect in stock volatility (11). In this study, we focus on the election effect on the Malaysian stock market during the 12th and 13th general election. Unlike the previous study that covered six past general elections, we only focus on the most two recent general elections due to the close fight between two major political parties. Prior to the year 2008, the general elections in Malaysia have not resulted in unexpected outcomes as the ruling Coalition Barisan Nasional (BN) won with a stable two-thirds majority in all the general elections. However, since the year 1969, the 12th general election in 2008 was the first time the Coalition BN lost the two-thirds majority in Parliament. The tense in the political condition continued to

the 13th general election in 2013. The number of seats won by the ruling Coalition BN in 2013 decreased compared to 2008. Once again, the Coalition BN failed to regain the stable two-thirds majority in the 13th general election.

Employing the Exponential Generalized Autoregressive Conditional Heteroskedasticity (EGARCH) model developed by Nelson (13), this study examines the stock volatility during general elections in Malaysia. In order to distinguish the effect prior the election and after the election, this study segregates the data into pre-general election period and post-general election period. In the selection of election period, we cover a longer period to include all political events which possibly affect the investors' confidence in making their investment decision. In this study, the pre-general election period starts from the day of dissolution of the Parliament until the day before voting, while the post-general election period starts from the day after voting until the first Parliament assembly.

The examination of stock volatility around elections in this paper contributes to the literature on a few grounds. First, the sample period in this study is designed in accord with the Malaysian election process, which is different with previous studies that focused on the event day (Wang & Lin, 2009) or fix event windows (7, 11, 14). The pre-general election and post-general election sample period are set according to the important date of the election in order to capture the full impact of the general election. Second, this study examines seven benchmark indices in Malaysia, including Shariah-compliant indices, to determine the impact of the election on stock indices with different market capitalization. This approach enables us to relate the stock volatility with market capitalization during the general election. Third, the MSCI World Index and MSCI Emerging Market Index are included to control for global and emerging market effect. This study has significant implication for investors as the findings can be of interest to adjust their portfolio during the general election.

This paper is organized as follows. Section II presents the data and Section III presents the methodology and preliminary analysis. Next, Section IV reports the estimated results and Section V provides a brief conclusion.

2. Data

This study uses daily closing values of seven selected indices in Bursa Malaysia, namely FTSE Bursa Malaysia Hijrah Shariah Index, FTSE Bursa Malaysia KLCI Index, FTSE Bursa Malaysia Top 100 Index, FTSE Bursa Malaysia EMAS Shariah Index, FTSE Bursa Malaysia EMAS Index, FTSE Bursa Malaysia Mid 70 Index and FTSE Bursa Malaysia Small Cap Index (Appendix 1). The sample period covers the 12th and 13th Malaysian general election (21 May 2007 to 31 December 2015), with a total of 2,248 observations. All data are collected from Bursa Malaysia (http://www.bursamalaysia.com). Table 1 shows the date of dissolution of Parliament, election date or voting date and the date of 1st Parliament assembly after the election for the 12th and 13th Malaysian general election.

Table 1: Malaysia General Election

	Dissolution of Parliament	**Election Day**	**1st Parliament Assembly after Election**
12th General Election	13 February 2008 (Wednesday)	8 March 2008 (Saturday)	28 April 2008 (Monday)
13th General Election	3 April 2013 (Wednesday)	5 May 2013 (Sunday)	24 June 2013 (Monday)

Source: Authors' compilation based on information from Election Commission of Malaysia and Parliament of Malaysia websites.

3. Empirical Methodology

Daily returns are calculated as the first difference in the natural logarithms of the stock market index, $R_t = 100 \times \ln(I_t / I_{t-1})$ where I_t and I_{t-1} are the values for each index for periods t and $t-1$, respectively. In the case of a day following a non-trading day, the return is calculated using the closing price of the latest trading day.

For an overview of the sample period, Table 2 presents the descriptive statistics of daily stock returns for the selected stock indices. All the stock indices have a positive average return over the sample period. The standard deviation and kurtosis are all positive, while the skewness for all the series is negative. The null hypothesis of normally distributed daily returns is rejected by the highly significant Jarque-Bera normality test. This finding is in line with most of the previous findings which found that stock return series is non-normally distributed. In addition, Table 3 shows the summary statistics of daily stock returns on the pre-general election and post-general election periods. Interestingly, the mean returns for the indices are all negative prior general election, while positive mean returns are recorded after the general election.

Table 2: Descriptive Statistics for the Malaysian Stock Indices

	BMEMAS	**BMT100**	**BMM70**	**BMKLCI**	**BMSC**	**BMES**	**BMHS**
Mean	0.0119	0.0115	0.0135	0.0102	0.0188	0.0142	0.0191
Max	4.4184	4.1961	5.2661	4.2587	6.7322	4.0747	4.5368
Min	-9.9494	-10.0817	-9.9045	-9.9785	-9.0170	-11.3205	-11.0873
Std. Dev.	0.7769	0.7746	0.8634	0.7622	1.0333	0.8061	0.8245
Skewness	-1.1855	-1.1571	-1.1950	-1.1581	-0.8067	-1.5094	-1.1982
Kurtosis	18.8855	19.4337	15.7521	19.2995	11.2360	23.8308	21.7728
Jarque-Bera	24163.1800	25797.7600	15766.7300	25387.3700	6597.3950	41497.5500	33547.6200
Probability	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Note: BMEMAS: FTSE Bursa Malaysia EMAS Index, BMT100: FTSE Bursa Malaysia Top 100 Index, BMM70: FTSE Bursa Malaysia Mid 70 Index, BMKLCI: FTSE Bursa Malaysia KLCI, BMSC: FTSE Bursa Malaysia Small Cap Index, BMES: FTSE Bursa Malaysia EMAS Shariah Index, and BMHS: FTSE Bursa Malaysia Hijrah Shariah Index.

Table 3: Summary Statistics for the Returns on Pre- and Post-General Election

	BMEMAS	**BMT100**	**BMM70**	**BMKLCI**	**BMSC**	**BMES**	**BMHS**
PreGE-Mean	-0.2062	-0.2021	-0.2687	-0.2039	-0.2928	-0.1982	-0.1892
PostGE-Mean	0.0456	0.0344	0.1007	0.0340	0.2369	0.0355	0.0533
PreGE-Max	1.3967	1.5471	1.3502	1.5086	1.1529	1.1519	1.4903
PostGE-Max	3.5972	3.5318	4.3072	3.3222	5.1983	3.2472	3.3339

PreGE-Min	-2.4440	-2.5106	-2.4713	-2.6051	-1.9755	-2.7384	-3.2789
PostGE-Min	-9.9494	-10.0817	-9.9045	-9.9785	-9.0170	-11.3205	-11.0873

Note: Pre-General Election: Dissolution of Parliament to the day before General Election; and Post-General Election**:** Day after the General Election to the first day of the Parliament Assembly.

The EGARCH (*p*, *q*)[1] model with dummy variables is applied to examine the general election effect and its volatility. The mean equation and variance equation of the EGARCH model are expressed as:

$$R_t = \alpha_0 + \alpha_1 PGE_t + \alpha_2 PtGE_t + \alpha_3 R_{t-1} + \chi_1 RWM_t + \varepsilon_t \qquad (1)$$

$$\log\sigma_t^2 = \beta_0 + \sum_{j=1}^{p}\gamma_j \log\sigma_{t-j}^2 + \sum_{i=1}^{q}\left(\beta_i\left|\frac{\xi_{t-i}}{\sigma_{t-i}} - \sqrt{\frac{2}{\pi}}\right| + \psi_i\frac{\xi_{t-i}}{\sigma_{t-i}}\right) + \alpha_1 PGE_t + \alpha_2 PtGE_t + \alpha_3 R_{t-1} + \chi_1 RWM_t \qquad (2)$$

$$R_t = \alpha_0 + \alpha_1 PGE_t + \alpha_2 PtGE_t + \alpha_3 R_{t-1} + \chi_1 REM_t + \varepsilon_t \qquad (3)$$

$$\log\sigma_t^2 = \beta_0 + \sum_{j=1}^{p}\gamma_j \log\sigma_{t-j}^2 + \sum_{i=1}^{q}\left(\beta_i\left|\frac{\xi_{t-i}}{\sigma_{t-i}} - \sqrt{\frac{2}{\pi}}\right| + \psi_i\frac{\xi_{t-i}}{\sigma_{t-i}}\right) + \alpha_1 PGE_t + \alpha_2 PtGE_t + \alpha_3 R_{t-1} + \chi_1 REM_t \qquad (4)$$

where R_t is the logarithmic return of the market index at day t; PGE_t and $PtGE_t$ are dummy variables; ε_t is the error term. PGE_t takes a value of one if the corresponding return for the day t is pre-general election period, while $PtGE_t$ takes a value of one if the corresponding return for the day t is post-general election period, and 0 otherwise. Meanwhile, in the mean equations of Equation (1) and Equation (3), the $\alpha_0,...,\alpha_3$ are parameters to be estimated. Among them, α_0 measures the mean return (in percentage) on other trading days; whereas α_1 and α_2 capture the average return of the stock index for the pre-general election period and post-general election period. The null hypothesis of this test is $H_0 : \alpha_1 = \alpha_2 = 0$, which implies that average daily returns (volatility) for the period of pre-general election and post-general election have no different. If the null hypothesis does not hold, then it can be concluded that the market index is characterized by statistically different on average returns (volatility) for the period of pre-general election and post-general election. In another word, this would imply that general election effect is indeed present in the market.

For the Equation (2) and (4), the left-hand side of the equations is the logarithm of the conditional variance. This implies that the leverage effect is exponential, rather than quadratic, and that forecasts of the conditional variance are guaranteed to be non-negative. In this case, the presence of leverage effects can be tested by the hypothesis that ψ_i > 0, whereas the impact is asymmetric if $\psi_i \neq 0$. Furthermore, a lagged value of the return variable was introduced in the equations to avoid serial correlation error terms in the model, which may yield misleading inferences.

Besides, the return variables for MSCI World Index (RWM_t) and MSCI Emerging Market Index (REM_t) are introduced into the mean equation and variance equation. For the Equation (1) and (2), return variable of MSCI World Index (RWM_t) is added to examine whether the returns during the election are associated with the MSCI World Index returns. While return variable of MSCI Emerging Market Index (REM_t) is added to Equation (3) and (4) as the control variables for emerging market effect. Both the MSCI World Index and MSCI Emerging Market Index are obtained from S&P Capital IQ. If the parameter of α_3 is insignificant, then it can be concluded that the returns during general election are not influenced by the MSCI World Index (RWM_t) and MSCI Emerging Market Index (REM_t) returns.

4. Empirical Results and Discussions

Firstly, we examine the presence of pre-general election and post-general election effect in the series of FTSE Bursa Malaysia Index by controlling the global effect. Table 4 reports the estimation results of the mean equation and variance equation of the EGARCH (1, 1) model based on Equation (1) and (2). Under the mean equation, the dummy coefficients of the pre-general election are positive only for the two Shariah-compliant stock indices. Conversely, the pre-general election dummy coefficients for the other stock indices are all negative. On the other hand, for post-general election, the dummy coefficients are all positive, except for the FTSE Bursa Malaysia KLCI. Nevertheless, the high *p*-value of dummy coefficient indicates insignificant stock returns among all the series of indices, for both the pre-general election and post-general election periods. Thus, there is no significant impact of general elections on average stock market returns in Malaysia. This finding with an insignificant abnormal return around election period is consistent with the studies of Lean H. H. (10) and Lean & Yeap (11).

The estimation of the variance equation is presented in the second part of Table 4. The results show that the Malaysian stock market encountered significant higher volatility in pre-general election periods during the 12th and 13th General Election. This finding is evident by the positive and highly significant pre-general election dummy coefficients for all the stock indices model estimation. Meanwhile, the post-general election dummy coefficients in the variance equation are mostly negative. Particularly, the FTSE Bursa Malaysia Top 100 Index and the FTSE Bursa Malaysia Hijrah Shariah Index have significant lower volatility. The findings from the mean and variance equations show that there is no after elections shock for companies stock in the top 100 largest companies and the top 30 largest Shariah-compliant companies.

By controlling the emerging market effect, the results of the mean equation and variance equation of the EGARCH (1, 1) model based on Equation (3) and (4) are presented in Table 5. The estimated results are similar to the first model which controlled for global market effect. In term of control variables, the dummy coefficients of the MSCI World Index for the mean equation and variance equation, as shown in Table 4, are negative and significant at 1% for all the series of FTSE Bursa Malaysia Index. The negative sign indicates that the Malaysian stock market returns and stock volatility are negatively affected by an increase in the global index. Meanwhile, we lack strong statistical evidence to show that movement of emerging stock market has an impact on stock volatility. Thus, the effect of emerging market on Malaysia stock market is not as vigorous as the global market effect.

The asymmetric effect of the general election is reported in Table 4 and Table 5. The significant asymmetry coefficient (ψ_i) strongly supports the asymmetric effect in most of the indices. Moreover, the positive sign of the asymmetry coefficient means that volatility increases more when returns shocks are positive. Besides, the validity of the model is supported by the diagnostic test with no remaining ARCH effect and serial correlation in all of the estimated models.

Overall, the examination of Malaysian stock market performance by large, medium and small companies' capitalization enable us to observe the impact of general election more precisely. Moreover, we also examine the general election effect on Shariah-compliant stocks. As shown in Figure 1, the index of the FTSE Bursa Malaysia Hijrah Shariah has the lowest volatility for pre-general election, followed by the FTSE Bursa Malaysia KLCI Index and the FTSE Bursa Malaysia Top 100 Index. Meanwhile, the FTSE Bursa Malaysia Small Capitalization Index has the highest volatility during the pre-general election periods. In term of stock volatility, the FTSE Bursa Malaysia EMAS Shariah Index is slightly lower compared to the FTSE Bursa Malaysia EMAS Index. The result indicates that, in term of volatility, companies stock with larger market capitalization are less affected by the election shock prior general election.

Table 4: Pre-General Election and Post-General Election: EGARCH Results Controlled by World Market Effect

Variables	**BMEMAS**	**BMT100**	**BMM70**	**BMKLCI**	**BMSC**	**BMES**	**BMHS**
(p, q)	*(1, 1)*	*(1, 1)*	*(1, 1)*	*(1, 1)*	*(1, 1)*	*(1, 1)*	*(1, 1)*
Mean Equation							
α_0	0.0311 (0.0085)***	0.0312 (0.0089)***	0.0328 (0.0141)**	0.0327 (0.0080)***	0.0493 (0.0009)***	0.0395 (0.0016)***	0.0266 (0.0358)**
PGE	-0.0291 (0.9107)	-0.0206 (0.9310)	-0.1352 (0.6000)	-0.0102 (0.9575)	-0.2152 (0.4784)	0.0201 (0.9332)	0.0016 (0.9940)
PtGE	0.0276 (0.7507)	0.0122 (0.8906)	0.1062 (0.2977)	-0.0098 (0.9053)	0.1861 (0.1248)	0.0487 (0.5862)	0.0461 (0.6161)
R_{t-1}	0.1563 (0.0000)***	0.1487 (0.0000)***	0.1677 (0.0000)***	0.1353 (0.0000)***	0.1527 (0.0000)***	0.1212 (0.0000)***	0.1151 (0.0000)***
RWM	0.1725 (0.0000)***	0.1675 (0.0000)***	0.1923 (0.0000)***	0.1633 (0.0000)***	0.2112 (0.0000)***	0.1749 (0.0000)***	0.1704 (0.0000)***
Variance Equation							
β_0	-0.1744 (0.0000)***	-0.1573 (0.0000)***	-0.1749 (0.0000)***	-0.1480 (0.0000)***	-0.2463 (0.0000)***	-0.1762 (0.0000)***	-0.1075 (0.0000)***
β_1	0.1834 (0.0000)***	0.1676 (0.0000)***	0.1911 (0.0000)***	0.1544 (0.0000)***	0.2987 (0.0000)***	0.1956 (0.0000)***	0.1298 (0.0000)***
ψ_i	0.0476 (0.1146)	0.0429 (0.1490)	0.0780 (0.0049)***	0.0645 (0.0394)**	0.1157 (0.0000)***	0.0638 (0.0160)**	-0.0048 (0.8354)
γ_1	0.9627 (0.0000)***	0.9681 (0.0000)***	0.9601 (0.0000)***	0.9658 (0.0000)***	0.9339 (0.0000)***	0.9632 (0.0000)***	0.9860 (0.0000)***
PGE	0.1592 (0.0000)***	0.1457 (0.0000)***	0.1673 (0.0000)***	0.1337 (0.0000)***	0.2072 (0.0000)***	0.1590 (0.0000)***	0.1073 (0.0000)***
PtGE	-0.0299 (0.1339)	-0.0329 (0.0682)*	-0.0209 (0.4148)	-0.0282 (0.1072)	0.0092 (0.8285)	-0.0248 (0.2514)	-0.0398 (0.0017)***
R_{t-1}	-0.1330 (0.0004)***	-0.1239 (0.0008)***	-0.1293 (0.0001)***	-0.1456 (0.0002)***	-0.1329 (0.0000)***	-0.1274 (0.0003)***	-0.0320 (0.2001)
RWM	-0.0475 (0.0000)***	-0.0425 (0.0001)***	-0.0517 (0.0000)***	-0.0366 (0.0018)***	-0.0725 (0.0000)***	-0.0467 (0.0001)***	-0.0440 (0.0000)***
(Diagnostic Checking)							
ARCH – LM Statistic (*p*-value)							
5 lags	0.4069	0.4195	0.5625	0.4011	0.8102	0.4243	0.7878
10 lags	0.5563	0.5003	0.9013	0.4783	0.6604	0.4926	0.6528
Ljung-Box Q^2 Statistic (*p*-value)							
5 lags	0.4070	0.4220	0.5660	0.3950	0.8130	0.4050	0.7710
10 lags	0.5270	0.4770	0.9010	0.4570	0.6620	0.4490	0.6400
Return Equation: Wald Test (*p*-value)							
F-stat	0.9402	0.9850	0.4636	0.9923	0.2539	0.8618	0.8818
Chi-Square	0.9402	0.9850	0.4635	0.9923	0.2537	0.8618	0.8818
Variance Equation: Wald Test (*p*-value)							
F-stat	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Chi-Square	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Note: BMEMAS: FTSE Bursa Malaysia EMAS Index, BMT100: FTSE Bursa Malaysia Top 100 Index, BMM70: FTSE Bursa Malaysia Mid 70 Index, BMKLCI: FTSE Bursa Malaysia KLCI, BMSC: FTSE Bursa Malaysia Small Cap Index, BMES: FTSE Bursa Malaysia EMAS Shariah Index, and BMHS: FTSE Bursa Malaysia Hijrah Shariah Index. ***, ** and * denote significance at 1, 5 and 10% levels respectively. Numbers in parentheses depict *p*-value. The null hypothesis of the Wald Test is $H_0 : \alpha_1 = \alpha_2 = 0$ (same average return / volatility for *pre*- and *post*-General Election).

Table 5: Pre-General Election and Post-General Election: EGARCH Results Controlled by Emerging Market Effect

Variables	**BMEMAS**	**BMT100**	**BMM70**	**BMKLCI**	**BMSC**	**BMES**	**BMHS**
(p, q)	*(1, 1)*	*(1, 1)*	*(1, 1)*	*(1, 1)*	*(1, 1)*	*(1, 1)*	*(1, 1)*
Mean Equation							
α_0	0.0253 (0.0113)**	0.0266 (0.0088)***	0.0293 (0.0102)**	0.0238 (0.0172)**	0.0418 (0.0028)***	0.0305 (0.0043)***	0.0299 (0.0067)***
PGE	-0.0217 (0.9263)	-0.0070 (0.9764)	-0.1511 (0.5027)	-0.0154 (0.9461)	-0.3199 (0.1566)	-0.0042 (0.9851)	0.0348 (0.8618)
PtGE	0.0828 (0.2949)	0.0718 (0.3684)	0.1751 (0.0523)*	0.0929 (0.2231)	0.1698 (0.1310)	0.1095 (0.1812)	0.1237 (0.1484)
R_{t-1}	0.1366 (0.0000)***	0.1305 (0.0000)***	0.1454 (0.0000)***	0.1246 (0.0000)***	0.1406 (0.0000)***	0.1062 (0.0000)***	0.1071 (0.0000)***
REM	0.3001 (0.0000)***	0.2918 (0.0000)***	0.3227 (0.0000)***	0.2847 (0.0000)***	0.3460 (0.0000)***	0.3014 (0.0000)***	0.2797 (0.0000)***
Variance Equation							

β_0	-0.1779 (0.0000)***	-0.1529 (0.0000)***	-0.1720 (0.0000)***	-0.1559 (0.0000)***	-0.2305 (0.0000)***	-0.1723 (0.0000)***	-0.1032 (0.0000)***
β_1	0.1724 (0.0000)***	0.1525 (0.0000)***	0.1752 (0.0000)***	0.1474 (0.0000)***	0.2662 (0.0000)***	0.1807 (0.0000)***	0.1223 (0.0000)***
ψ_i	0.0431 (0.0425)**	0.0482 (0.0264)**	0.0302 (0.1551)	0.0703 (0.0026)***	0.0899 (0.0001)***	0.0458 (0.0296)**	0.0089 (0.6601)
γ_1	0.9632 (0.0000)***	0.9705 (0.0000)***	0.9644 (0.0000)***	0.9639 (0.0000)***	0.9488 (0.0000)***	0.9672 (0.0000)***	0.9885 (0.0000)***
PGE	0.1789 (0.0000)***	0.1593 (0.0000)***	0.1843 (0.0000)***	0.1579 (0.0000)***	0.2083 (0.0000)***	0.1782 (0.0000)***	0.1140 (0.0000)***
PtGE	-0.0380 (0.0892)*	-0.0423 (0.0364)**	-0.0358 (0.1208)	-0.0324 (0.1237)	-0.0216 (0.5565)	-0.0382 (0.0770)*	-0.0499 (0.0001)***
R_{t-1}	-0.1267 (0.0001)***	-0.1228 (0.0001)***	-0.0812 (0.0028)***	-0.1472 (0.0000)***	-0.0996 (0.0000)***	-0.1089 (0.0010)***	-0.0354 (0.1690)
REM	-0.0181 (0.1191)	-0.0141 (0.2222)	-0.0293 (0.0050)***	-0.0058 (0.6270)	-0.0350 (0.0007)***	-0.0137 (0.2592)	-0.0245 (0.0060)***
(Diagnostic Checking)							
ARCH – LM Statistic (*p*-value)							
5 lags	0.4634	0.3789	0.0960	0.5581	0.8591	0.0474	0.4257
10 lags	0.8209	0.7242	0.2793	0.8776	0.3720	0.1731	0.4322
Ljung-Box Q^2 Statistic (*p*-value)							
5 lags	0.4550	0.3750	0.0980	0.5430	0.8630	0.0430	0.4110
10 lags	0.8060	0.7080	0.2960	0.8650	0.3890	0.1490	0.4200
Return Equation: Wald Test (*p*-value)							
F-stat	0.5757	0.6667	0.1144	0.4715	0.1021	0.4092	0.3477
Chi-Square	0.5757	0.6666	0.1142	0.4714	0.1018	0.4091	0.3475
Variance Equation: Wald Test (*p*-value)							
F-stat	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Chi-Square	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Note: BMEMAS: FTSE Bursa Malaysia EMAS Index, BMT100: FTSE Bursa Malaysia Top 100 Index, BMM70: FTSE Bursa Malaysia Mid 70 Index, BMKLCI: FTSE Bursa Malaysia KLCI, BMSC: FTSE Bursa Malaysia Small Cap Index, BMES: FTSE Bursa Malaysia EMAS Shariah Index, and BMHS: FTSE Bursa Malaysia Hijrah Shariah Index. ***, ** and * denote significance at 1, 5 and 10% levels respectively. Numbers in parentheses depict *p*-value. The null hypothesis of the Wald Test is $H_0: \alpha_1 = \alpha_2 = 0$ (same average return / volatility for *pre*- and *post*-General Election).

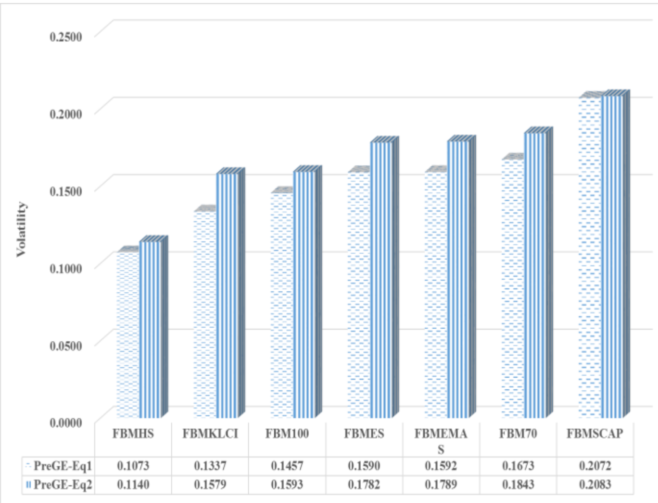

Fig. 1: The Low Volatility to High Volatility during the Pre-General Election for the Selected Stock Indices

5. Conclusion

This study investigates the effect of the Malaysian general elections on its stock market volatility from the year 2007 to 2015. Using the EGARCH model, we find significant election effect in stock volatility but not in stock returns. Specifically, the stock volatility for all selected stock indices is significantly higher during pre-general election periods but only two stock indices (FTSE Bursa Malaysia Hijrah Shariah Index and FTSE Bursa Malaysia Top 100 Index) recorded lower stock volatility in the post-general election periods. Notably, political uncertainty due to the close fight between major parties during the 2008 and 2013 general election had a significant role in influencing the stock volatility prior to the election. Furthermore, this study also finds that Shariah-compliant indices have lower stock volatility compare to other indices.

The value added of this paper is we provide a detailed examination of Malaysian stock market performance around general election by dividing into large, mid, small cap, and Shariah-compliant indices. The findings show the relevance of market capitalization to stock market volatility. Companies with small capital experienced higher stock volatility prior to general election. The stock market volatility is indeed lower for larger companies stock. We also observe relatively lower stock volatility in Shariah-compliant indices which suggest that Shariah-compliant companies stock have a lower risk during pre-general election periods.

This study contributed to the evidence of general election influences stock market volatility and made an effort to investigate the general election effect on stock indices with different size of market capitalization. The implications of this study for investors are important. Risk-averse investors could mitigate the political risk by diversifying their portfolio in large companies stock and Shariah-compliant companies stock. Furthermore, an investor should be vigilant during pre-general election periods as their profits are underlying high volatility and compensation for abnormal high returns is negligible.

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References

[1] Nordhaus WD. The political business cycle. The review of economic studies. 1975;42(2):169-90.
[2] Loewenstein GF, Weber EU, Hsee CK, Welch N. Risk as feelings. Psychological bulletin. 2001;127(2):267.

[3] Pearce DK. Stock prices and the economy. Federal Reserve Bank of Kansas City Economic Review. 1983;68(9):7-22.
[4] Peel D, Pope P. General elections in the UK in the post 1950 period and the behaviour of the stock market. Investment Analyst. 1983;67:4-10.
[5] Gemmill G. Political risk and market efficiency: tests based in British stock and options markets in the 1987 election. Journal of Banking & Finance. 1992;16(1):211-31.
[6] Lobo BJ. Jump risk in the US stock market: Evidence using political information. Review of Financial Economics. 1999;8(2):149-63.
[7] Nippani S, Arize AC. US presidential election impact on Canadian and Mexican stock markets. Journal of Economics and Finance. 2005;29(2):271-9.
[8] Wong W-K, McAleer M. Mapping the Presidential Election Cycle in US stock markets. Mathematics and Computers in Simulation. 2009;79(11):3267-77.
[9] Wang Y-H, Lin C-T. The political uncertainty and stock market behavior in emerging democracy: the case of Taiwan. Quality & Quantity. 2009;43(2):237-48.
[10] Lean H. Political general election ad stock performance: The Malaysian evidence. Research in Mathematics and Economics Penang: Universiti Sains Malaysia. 2010;111:120.
[11] Lean HH, Yeap GP. Asymmetric 13 effect of political elections on stock returns and volatility in Malaysia. Information Efficiency and Anomalies in Asian Equity Markets: Theories and Evidence. 2016:228.
[12] Białkowski J, Gottschalk K, Wisniewski TP. Stock market volatility around national elections. Journal of Banking & Finance. 2008;32(9):1941-53.
[13] Nelson DB. Conditional heteroskedasticity in asset returns: A new approach. Econometrica: Journal of the Econometric Society. 1991:347-70.
[14] Chuang C-C, Wang Y-H. Electoral information in developed stock market: testing conditional heteroscedasticity in the market model. Applied Economics. 2010;42(9):1125-31.

Notes:
[1]According to Bolerslev, Chou, & Kroner (1992), in testing the GARCH models, $p = q = 1$ is sufficient for most financial series. Hence, the highest order of p and q considered in this study for the EGARCH model is (*1*, *1*).

Appendix 1: Details of the Selected Indices in this Study

Selected Indices in this Study		Details of the Indices
BMEMAS	FTSE Bursa Malaysia EMAS Index	Constituents of the FTSE Bursa Malaysia Top 100 Index and FTSE Bursa Malaysia Small Cap Index
BMT100	FTSE Bursa Malaysia Top 100 Index	Sum of constituents in FTSE Bursa Malaysia Mid 70 Index and FTSE Bursa Malaysia KLCI
BMM70	FTSE Bursa Malaysia Mid 70 Index	Constituents of the next 70 companies in FBMEMAS
BMKLCI	FTSE Bursa Malaysia KLCI	Constituents of 30 largest companies in FBMEMAS by full market capitalization
BMSC	FTSE Bursa Malaysia Small Cap Index	Constituents of top 98% of the Bursa Malaysia Main Market excluding FTSE Bursa Malaysia Top 100 Index constituents
BMES	FTSE Bursa Malaysia EMAS Shariah Index	Shariah-compliant constituents of the FBMEMAS that meet the screening requirement of the SAC
BMHS	FTSE Bursa Malaysia Hijrah Shariah Index	Constituents of 30 largest Shariah-compliant companies in FBMEMAS screened by Yasaar Ltd and the Securities Commission's Shariah Advisory Council (SAC)

Source: Authors' compilation based on information from Bursa Malaysia’s website. For further information, please visit: http://www.bursamalaysia.com.