

Political Business Cycles in a Transitional Economy: The Case of Vietnam

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Abstract

Political business cycles in democratic countries have been well established in literature. However, as far as it can be ascertained, there is no investigation as to whether political business cycles exist in a single party political system countries. Additionally, measuring the effect of political events on the economy in real sectors would prove extremely time-consuming. In financial market, the effects of any newsworthy events such as leadership election will be promptly reflected in security prices and, hence, in market indices. Given the characteristic of financial market and to fill the literature gap, this study uses the Vietnamese equity index to estimate the autoregressive distributed lag model to determine if political business cycles exist in the Vietnamese transitional economy. Descriptive statistics and estimation results for an autoregressive distributed lag (ARDL) model strongly suggests that such cycles are present in the Vietnamese transitional economy over the period of October 15, 2015 through May 4, 2016. The results further indicate that the four-day lag of the Communist Party's actions affect the equity market and hence real economic activities

Key Words: Political business cycles, intervention model, equity index, autoregressive distributed lag model, Vietnam.

1. Introduction

Niederhoffer et al. (1970) conducted a seminal study of the effects of United States presidential elections on the US stock markets. This groundbreaking exploration inspired further research into the relationship between political and economic factors. The examination of how such important topics as political risk, voting, and election timing are associated with fluctuations in national and global economies has proven a fertile topic of inquiry.

Globally, political systems follow quite diverse election processes. The US presidential election process, for example, involves primary voting, candidates' debates, and intensive backroom maneuvering activities, all leading up to the general election. Business decision makers in market economies, such as that of the United States, include international and domestic investors and entrepreneurs, most of whom act independently of the political leadership of the country (admittedly though, a small number of these decision makers are allies of the political leadership). Under the assumption of self-interest, these economic units assess the risks of prospective fiscal activities and make decisions to maximize returns on their investments.

All decisions made by political leaders of a country affect, and often alter, the risk profiles of economic activities and thus affect both the economy and the living standard of the populace. In the US, presidential elections take place every four years, and most presidential candidates hail from one of the two major political parties — Republican or Democrat. Each

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party holds different socio-economic and political ideologies. The views of these candidates typically align with those of the affiliated party.

Once a candidate is elected, by virtue of a process characterized by extensive stumping and protracted intra-and inter-party debate, his or her socio-economic political ideology becomes evident. Thus, the boundaries and direction of his/her national policy is, at the least, more readily predictable. Economic units, including the allies of newly-elected leaders, can then better assess potential risks in order to maximize the return on their business investment opportunities. They are able to confidently pursue their desired projects resulting in increased business activities which in turn precipitates the expansionary phase of the political business cycle.

By the middle of the elected term (approximately the third year in the US presidential election process) anxiety concerning the future, i.e., the results of the next election and the question of whether the incumbent will serve another term (Wong & McAleer, 2009), tend to resurface. Prognosticative uncertainty depends upon how well the incumbent has performed throughout the first half of the elected term as well as on the state of domestic and international matters both economic and political. These factors collectively serve to precipitate the contractionary phase of the political business cycle.

In countries with transitional economies such as Vietnam and the People's Republic of China with a single party political system, a common characteristic is the close relationship between the business community and the political leadership. With political leadership elected periodically, these economies transformed from centrally-planned to market-oriented, with most members of the domestic business community being current party members, former party members, or party member allies.

Additionally, even in a single-party political system, there are fractures within the party stemming from different policy orientations. Individual groups may have quite different support components or allies within the business community. Depending on both the domestic and international social, economic, and political situation, one group may stand a better chance to be selected for leadership positions over another. In Vietnam, these "special interest groups," including the so-called "crony capitalists," were given access to and control of Vietnam's scarce resources, financial and otherwise.

The election of leadership in a single-party political system may not include campaign speeches, political debates, or primary elections, but it does involve many years of fashioning one's position through maneuvering and negotiation. These machinations take place both openly and covertly. This political courtship intensifies as election day approaches, often engendering last-minute compromise.

Similar to the uncertainty inherent to multiple party political systems before the final selection process, protégés of all groups and international investors anxiously await the outcome of an election to learn whether their candidates are elected. Once the election results are determined to impact a particular group or groups, its protégés and international entrepreneurs become active in their specific business ventures. This activity spurs the expansionary phase of the business cycle in the economy. Again, once approximately half of the elected term has passed, the next election process begins, and the associated uncertainty slows business activities, thereby precipitating the contractionary phase of the aforementioned cycle.

The task of isolating and measuring the economic effects of political events, such as those exemplified by the aforementioned cycle, may seem hopelessly impossible since these events initially change economic activities such as investment, production, and consumption. These changes will, in turn, alter macroeconomic variables including but not limited to GDP, unemployment, and inflation. Measuring the effect of political events on the economy would prove extremely time-consuming. Fortunately, financial market data is based on the assumption

that markets are rational and efficient (or even manipulated). The effect of this efficiency is that any newsworthy event will be promptly (immediately if the market is truly efficient) reflected in security prices and, hence, in market indices. To this end, MacKinlay (1997) argued that a measure of an event's economic impact can be constructed using financial market data, observed over a relatively short time period. In contrast, measurement by direct productivity may require many months, or even years, of observation before the effects can be measured.

The 12th National Congress of the Communist Party of Vietnam convened in 2016, from January 20-28, to elect the country's top leaders. This process occurs every five years. As usual, a great deal of open and covert maneuvering and negotiation took place before and during the first few days of the convention. The result was last-minute compromises being effected. By way of supporting evidence, in the sixty-eight- (68) day period, from January 20, 2016 (the beginning of the convention) to May 4, 2016, the Vietnamese equity index gained a daily average of 1.03 points, compared to a loss of 0.83 points per day in the prior 68 days, the period spanning October 15, 2015 to January 19, 2016.

In the age of globalization, equity indices of countries tend to be more correlated which may suggest that the behavior of the Vietnam VN Index (VNI) described above simply reflects the behavior of the international equity markets. Relative to the Shanghai and US S&P 500 indices, the VNI appears to be more correlated in recent years. However, in October 2015 the VNI increased sharply while the Shanghai and US S&P 500 indices barely increased and likewise dropped more sharply than the other two indices in January 2016.

Insofar as it can be ascertained, there has been no empirical investigation into the existence of political business cycles in transitional economies. Given the premise expressed above, such a line of inquiry remains an important area in need of further exploration. The objective of this study is to specify and utilize the Vietnamese equity index in order to estimate an autoregressive distributed lag model that will allow the assessment of whether a political business cycle exists in Vietnam. If evidence of the cycle is found, the empirical results will be analyzed to determine the nature of the transmission mechanism as to how political undertakings manifest themselves in economic activities.

The remainder of the paper is structured as follows: Section 2 briefly describes the Vietnamese equity market; Section 3 provides a short survey of the Political Business Cycle literature; Section 4 introduces the methodology utilized in the study; Section 5 defines the data employed to conduct this empirical investigation; Section 6 reports the empirical results; and Section 7 presents a summary and some concluding remarks.

2. Vietnamese Equity Market

Vietnam's first stock exchange, known as the Ho Chi Minh City Securities Trading Center, was established in July 2000. By the spring of 2005, the number of companies listed on the exchange had reached twenty-eight (28), representing a total market capitalization of US \$270 million. In March 2005, Vietnam opened an over-the-counter exchange known as the Hanoi Securities Trading Center. The purpose of the second exchange was to expedite the process of equitization (partial privatization) of state-owned enterprises. Although these exchanges are still very small, officials established the goal of expanding their combined market capitalization to ten percent (10%) of gross domestic product by 2010 and gradually phasing out restrictions on foreign ownership of shares. In September 2005, Vietnam's Prime Minister announced that the limit on foreign share ownership would rise from 30 percent to 49 percent. Actually, at the end of 2014, the number of companies listed was 1001, and the total market capitalization was 46.07 billion US dollars. The Vietnamese total equity market capitalization accounts for only 24.70 percent of gross domestic product, as compared to 58.00 (China), 76.10 (India), 47.50 (Indonesia), 95.10 (Korea), 86.00 (Malaysia), 135.80 (Philippines), 91.90 and 244.50 (Singapore),

(data.worldbank.org/indicator/CM.MKT.LCAP.GD.ZS). The Vietnam Stock Index, or VNI, is a capitalization-weighted index of all the companies listed on the Ho Chi Minh City Stock Exchange.

On May 3, 2006, the Viet Nam Securities Depository officially went into operation under Decision No. 189/2005/QĐ – TTg, signed on July 27, 2005, designed to increase market performance in general, and the performance of the clearing and settlement systems, in particular. On June 1, 2006, the Hanoi Securities Trading Center increased the number of trading days from three to five days a week in order to increase market liquidity. On June 14, 2006, the Ho Chi Minh City Securities Trading Center raised the number of order matching phases from two to three phases a day (1st phase from 8h40 to 9h10, 2nd phase from 9h20 to 9h50, 3rd phase from 10h to 10h30) in order to meet investor trading demand. Finally, the official acceptance, in 2007, of the Ho Chi Minh City Stock Exchange to become the 150th member of the World Trade Organization (WTO) significantly changed the landscape of the Vietnamese equity market. Inclusion in the WTO provided Vietnam with new opportunities (and challenges) as the country experienced global cultural and economic integration.

3. Brief Review of Literature

In general, aside from official election coverage, the media rarely discuss the interaction between politics and economics. As a result, many individuals fail to fully grasp how intrinsically linked the two fields are and to what degree this relationship may affect their financial well-being. This is especially true with regard to direct investment in the stock market or through pension plans (Wisniewski, 2015). In seeking to shed light on the phenomenon, numerous researchers have attempted to merge the political science and finance research streams to better assess how the two interact.

The findings of Pantzalis et al.'s (2000) study regarding the relationship, at an international level, between political elections and the stock market have, in particular, brought about renewed interest in the interaction of politics and economics. In analyzing data for thirty-three (33) countries, Pantzalis et al. discovered that, during the two-week period directly preceding an election, the stock market usually experiences statistically significant abnormal positive index returns and that the magnitude of this effect is moderated by uncertainty in the election's ultimate outcome. (This is especially the case in nations exhibiting low economic, political, and press freedom ratings or in elections that result in the incumbent's being removed from office.) Further study by Bialkowski et al. (2008) using a sample of twenty-seven (27) Organization for Economic Co-operation and Development (OECD) countries added to Pantzalis et al.'s work by finding support for the theory that investors are often caught off-guard by voting distribution and that this shock results in stock price volatility.

Research provides evidence that, in the United States, stock market returns tend to remain higher during a Democratic president's time in office than under a Republican's and that this disparity results from neither business-cycle variations nor election dates (Santa-Clara & Valkanov, 2003; Booth & Booth, 2003). In addition, Booth and Booth (2003) discovered that, during the studied period of 1926 to 1996, small-cap stock portfolios yielded higher returns with a Democratic president in office. Large-cap stock portfolios on the other hand, remained in line with those during Republican administrations. Further, the researchers found evidence that, in the US, excess returns on equity investments were typically greater in the second half of a president's four-year term than during the president's first two years in office.

Vechelen (2001) replicated in Belgium certain aspects of the investigations discussed above and learned that stock price seems to correlate positively with a center-left coalition's assumption of office and negatively with a center-right coalition's gaining control. (Interestingly, investors tend to view blended-party coalitions composed of left- and right-wing politicians – but no centrists – negatively.) Expanding on these findings, Leblang and

Mukherjee (2005) developed a speculative trading framework that could be leveraged in order to better understand the proposed relationship between trading volume and speculation regarding election results. The researchers applied this model in their study of both the United States and Britain's equity markets to assess share price means and volatility.

Investigation conducted by Siokis and Kapopoulos (2007) into the Greek economy revealed that Greece's conditional stock market index variances shift with respect to changes in political regime. Volatility was found to increase before an election and after a right-wing victory. Subsequently, a similar inquiry performed by Ortega and Torero (2009) on the Spanish economy provided evidence that volatility increased on Spain's Election Day (or, when the election is held over a weekend, the following Monday) and that prices fell before an election takes place and return to their previous trading range afterward.

The Political Business Cycle (PBC) literature provides context for such findings. The pioneering work of Nordhaus (1975), theorized that the beginning of a political regime is usually marked by restraint but that this disciplined approach generally gives way to immoderation during the twilight of an administration. Based on the tenets of PBC theory, some researchers have favored an "opportunistic" view while others have gravitated toward a "partisan" interpretation. "Opportunistic" PBC researchers posit that, in the days preceding an election, officials leverage the imminent change of government as an opportunity to enact expansionist activities designed to bolster the economy. While the ratification of such policies should, in theory, result in statistically significant positive index returns, some studies have noted that the market can predict the fleeting impact of these actions, which would result in share prices' remaining unaffected.

"Partisan" PBC theorists, instead, aver that there exists a marked disparity between political parties. These researchers suggest that the stock market fluctuates based on the political party in power, since leftists tend to favor expansion, while right-wing administrations usually focus more intently on curbing inflation.

Interestingly, Brown et al.'s (1988, 1993) Uncertain Information Hypothesis adds a further dimension to the discussion by refuting the "opportunistic" PBC postulation that suggests politicians' systematic efforts to fortify the stock market just before an election (Vuchelen, 2003). They instead propose that, preceding an uncertain event, investors establish share prices at a level less than their fundamental values in order to account for ambiguity. As the range of potential outcomes narrow and the future more defined, risk-adjusted expected return would then decrease as share prices increase. Mehdian et al. (2008) indicate that, given the fact that candidates' campaigns pull out all the stops, and the media dramatically ramps up its coverage a few days before an election is set to take place, an upward correction would be most strongly demonstrated immediately before election day.

4. Methodology and Model Specification

Econometrically, there are many statistical procedures, including intervention analysis, event study, or autoregressive integrated moving average (ARIMA) modeling, that could be used to simulate the impact of political events such as Communist Party leadership selections and presidential elections on the economic activities of a given country. To specify the model for empirical analysis, this study specifies and estimates the following autoregressive distributed lag (ARDL) model, hypothesizing the relationship between the endogenous variable p_t and the independent/intervention variable z_t :

$$p_t = \mu + \sum_{i=1}^n \beta_i p_{t-i} + \sum_{d=0}^m \gamma_d z_{t-d} + \sum_{j=1}^k \varphi_j u_t + \varepsilon_t \quad (1)$$

where $\{p_t\}$ and $\{z_t\}$ are the values of the dependent variable and the intervention variable of the model at time t , respectively. μ , β_i 's, γ_d 's, and φ_j are parameters of the model to be estimated. $\{u_t\}$ is the US S&P 500 index, included in equation (1) to account for the possible correlations among international equity indices over the sample period.

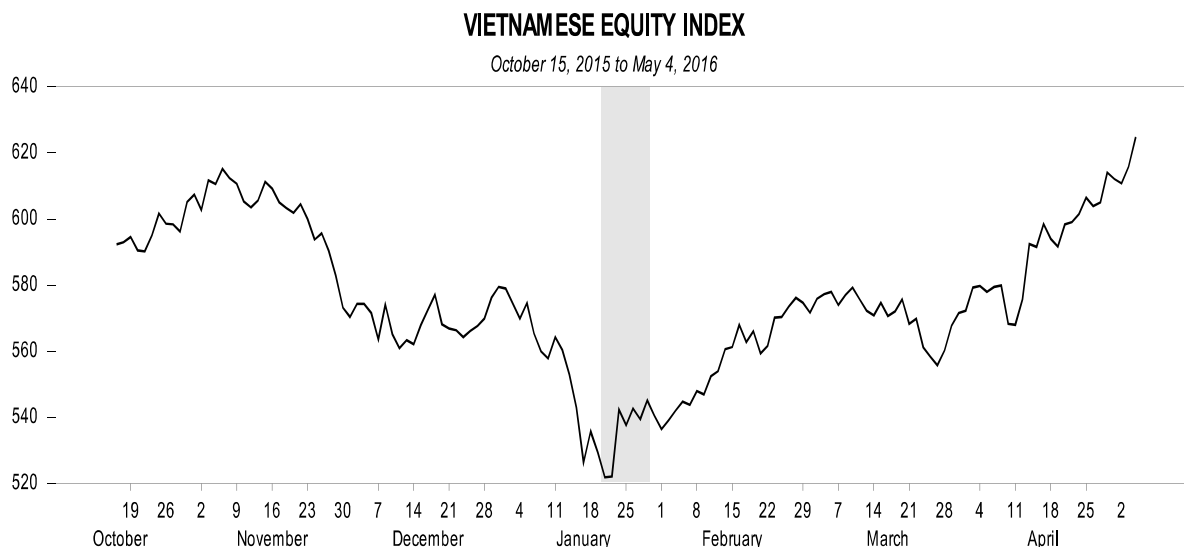
In this model specification, $\{z_t\}$ is not constrained to have any particular deterministic time path. Also, the second summation $\sum_{d=0}^m \gamma_d z_{t-d}$ is known as the transfer function in that it shows how movement in the intervention variable $\{z_t\}$ affects the time path of the endogenous variable p_t . The coefficients γ_d 's are known as transfer function weights. Additionally, if $\{p_t\}$ are assumed to have no effect on $\{z_t\}$, then $E(z_t \varepsilon_{t-s}) = 0$ for all values of s and t . Under this assumption of exogeneity, and since z_t can be observed and is uncorrelated to the current value of p_t , the current and lagged values of z_t are explanatory variables for p_t .

More interestingly, if $\gamma_0 = 0$, i.e. the contemporaneous value of z_t does not directly affect p_t , then $\{z_t\}$ is defined as a leading indicator in that the observations of $z_t, z_{t-1}, z_{t-2}, \dots$ can be used in predicting future values of the $\{p_t\}$ sequence. Otherwise, if $\gamma_0 \neq 0$, predicting p_{t+1} necessitates predicting the value of z_{t+1} .

As suggested by Enders (2010), the estimation process first approximates equation (1) using the largest values of n , m and k deemed feasible; then, F-tests and t-tests are used to pare down the model by eliminating unnecessary coefficients. Durbin-Watson and Ljung-Box Q-statistics are then used as diagnostics to test the hypothesis that the residuals $\{\varepsilon_t\}$ are white noise.

5. Data

In using the Vietnamese equity index to estimate the autoregressive distributed lag model (1), let p_t be the equity index at time t , z_t be the intervention variable (assuming a value of zero from October 15, 2015 through January 19, 2016, the day before the convention and one from January 20, 2016, the first day of the convention through May 4, 2016). As to relative magnitude, the US S&P 500 index is roughly 3 times the size of the VNI. Thus, to scale down the size difference, the US S&P 500 index is divided by three and the resulting series is used for the estimation process.



Note: Data is from <http://www.cophieu68.vn/historyprice.php?id=^vnindex>, retrieved on May 6, 2016.

Figure 1

Figure 1 displays the behavior of the Vietnamese equity index over the sample period. A close look at the graph reveals that, beginning in early November 2015, the index oscillated around a fairly steep downward trend, reaching its periodic trough on January 21, 2016. The index then fluctuated around a steep upward trend through the remainder of the sample period. Over the sixty-eight-day period prior to the convention, the average index was 582.35, with the index's ranging from 526.40 to 615.20 and the standard deviation's equaling 20.43. Over the sixty-eight-day period following the convention, the average index was 565.29, with the index's ranging from 521.90 (reached on the second day of the convention) to 599.10 and the standard deviation's equaling 18.05. The descriptive statistics also reveal that the equity index was more volatile pre-convention than post-convention. These characteristics of the Vietnamese equity index strongly suggest the existence of political business cycles that affect Vietnam's economy.

6. Empirical results

As indicated in the methodology, this study first estimates equation (1) using the largest values of n and m deemed feasible. The estimation process uses the Akaike information criterion (AIC) to determine that the optimal values are $n = 1$, $m = 4$ and $k = 1$, ARDL(1,4,1). The estimation results are summarized in Exhibit 1.

Exhibit 1: Estimation Results for ARDL(1,4,1) Model, October 15, 2015 –May 4, 2016

$$p_t = -7.6327 + 0.9363 p_{t-1} - 4.5937 z_t - 1.17152 z_{t-1} + 6.5078 z_{t-2} + 20.5598 z_{t-3} + 20.5598 z_{t-4} + 0.0645 u_t + \varepsilon_t$$

$$\begin{array}{ccccccc} (-0.4739) & (25.2412^*) & (-0.8706) & (-0.2399) & (0.9078) & (2.8757^*) & (-3.6822^*) \\ & (2.1334^*) & & & & & \end{array}$$

$$\text{Akaike info criterion} = 6.1373 \quad \text{DW} = 1.9086$$

$$Q_{LB(12)} = 7.8880[0.7938] \quad \text{Log Likelihood} = -384.7030 \quad F_{(7,120)} = 295.7909^* \\ \bar{R}^2 = 0.94$$

$$F_{(3,120)} = 0.6857 \text{ testing the null hypothesis: } H_0 : \gamma_0 = \gamma_1 = \gamma_2 = 0$$

Note: “*” indicates 1 percent significant level.

The estimation results of the autoregressive model are summarized in Exhibit 1, with the t-statistics in parentheses. An analysis of the overall estimation results indicates that there exists no serial correlation and that the model exhibits strong predictive power, as evidenced by the Durbin-Watson statistic of 1.9086 and the overall $F_{(7,120)} - statistic = 295.7909$, respectively. The strength of the Ljung-Box statistic of 7.8880 confirms that the estimated residuals are white noise. Also it is important to note that Vietnam is twelve hours ahead of the US and the strength of the calculated t-statistic = 2.1334 indicates that the estimated coefficient φ_0 is significant at 1 percent level. These empirical findings reveal a one day lag effect from the US S&P 500 index to the VNI indicating possible delayed linkages among international equity markets, at least over this fairly short sample period.

Calculated t-statistics indicate that the estimated coefficients of z_t , z_{t-1} , and z_{t-2} are statistically insignificant, even at the 10 percent level. Additionally, the calculated $F_{(3,120)} - statistic = 0.6857$ indicates that the null hypothesis $H_0 : \gamma_0 = \gamma_1 = \gamma_2 = 0$ could not be rejected at any conventional significance level. Both the t-statistics and F-statistic confirm that the explanatory variables z_t , z_{t-1} and z_{t-2} do not statistically affect the time path of the Vietnamese equity index from October 15, 2015 through May 4, 2016.

These results necessitated a re-estimation of the model, excluding explanatory variables z_t , z_{t-1} and z_{t-2} from the equation. The empirical results of the re-estimation are reported in Exhibit 2. As in Exhibit 1, t-statistics are reported in parentheses.

Exhibit 2: Final Estimation Results for ARDL Model, October 15, 2015 – May 4, 2016

$$p_t = -15.20626 + 0.943084 p_{t-1} + 21.59608 z_{t-3} - 19.74814 z_{t-4} + 0.069573 u_t + \varepsilon_t \\ (-1.053480) \quad (26.58797^*) \quad (4.109458^*) \quad (-3.814279^*) \quad (2.333959^{**})$$

$$\text{Akaike info criterion} = 6.107513 \quad \text{DW} = 1.892329$$

$$Q_{LB(12)} = 8.498[0.74200] \quad \text{Log Likelihood} = -385.8808 \quad F_{(4,123)} = 521.1145^* \\ \bar{R}^2 = 0.94$$

Note: “*” and “**” indicate the 1 percent and 5 percent significance levels.

Again, a close look at the overall estimation results indicates that they are free of serial correlation and have strong predictive power and have strong predictive power, as evidenced by the Durbin-Watson statistic of 1.892329 and the overall $F_{(4,123)} - statistic = 521.1145$, respectively. The calculated Ljung-Box statistic of 8.4980 again confirms that the estimated residuals are white noise.

7. Concluding Remarks

In an effort to both determine whether political business cycles exist in the Vietnamese transitional economy and to help fill the existing gap in the empirical political-economic literature, this study specified and used the Vietnamese equity index to estimate an autoregressive dynamic model (ARDL).

An examination of the level of the Vietnamese equity index revealed that the index (i) oscillated around a fairly steep downward trend reaching its periodic trough on the second day of the Communist Party's National Congress Convention to elect leadership for the Communist Party and (ii) then fluctuated around a steep upward trend through the remainder of the sample period. Also, the index was more volatile during a sixty-eight-day period prior to the convention than it was through the sixty-eight days following the convention. These descriptive characteristics of the Vietnamese equity index strongly suggest the existence of political business cycles that affect Vietnam's economy.

A more rigorous empirical analysis indicates that political actions taken by the Vietnamese Communist Party have a two-day delayed impact on the equity market. The estimation results indicate that the contemporaneous value of z_t does not directly affect p_t ; therefore, as discussed in the methodology section, z_{t-3} and z_{t-4} can be used in predicting future values of the $\{p_t\}$ sequence. As results of the final estimation of the model reveal, the four-day lag of the Communist Party's actions affect the equity index, after accounting for possible correlations among international equity indices.

Finally, as pointed out by MacKinlay (1997), the equity market serves as a leading indicator in the sense that it captures the discounted costs and benefits of real economic activities, enabling a means by which to quickly identify variables that would otherwise take much longer to realize. Ultimately, evidence linking political actions to the equity index indicates that these actions do, in fact, affect both the well-being of the economy and the living standard of the populace.

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