Day of the Week Effect in the Vietnam Stock Market: Evidence from the VN Index

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ABSTRACT

This study presents a comprehensive empirical analysis of the day-of-the-week effect within the Vietnamese stock market using an extensive 25-year dataset of the VN-Index (VNI). Utilizing an Ordinary Least Squares (OLS) regression model with weekday dummy variables, the analysis examines 6,127 daily closing prices from 2001 to 2025 to test for systematic variations in mean weekday returns. The empirical findings, supported by descriptive summary statistics, reveal a statistically significant negative Monday effect, contrasted by highly significant positive returns on Wednesdays, Thursdays and Fridays. Furthermore, a sub-period robustness check demonstrates that while the Monday effect persisted throughout the sample, it became significantly more pronounced in the post-COVID phase (2020-2025). These findings confirm the long-term presence of calendar anomalies, suggesting that the Vietnamese stock market does not strictly adhere to weak-form efficiency. Ultimately, this research offers valuable insights for investors regarding market-timing strategies while emphasizing the critical role of market frictions and transaction costs in determining the practical viability of such strategies.

Keywords: VN-Index, Emerging markets, Day-of-the-week effect, Efficient Market Hypothesis, Stock Market

INTRODUCTION

Established as the benchmark of the Vietnamese stock market, the VN-Index (VNI) is a capitalization-weighted index that measures the performance of the overall market (Trading Economics). The index represents the current value of the market capitalization as measured against its base value with dynamic adjustments to reflect the essential activities in the market, such as new equity listings and delistings as well as the change in the outstanding share capital.

Capital markets play an important role in the economy because they are responsible for mobilizing public savings into productive investments, as the core objective is to generate returns for investors. The predictability of these returns is inherently related to the efficiency of the markets. According to the Efficient Market Hypothesis (EMH), there are three types of efficiency in the markets, including weak, semi-strong, and strong. Weak-form efficiency assumes that the stock prices are reflective of all previous data, semi-strong efficiency considers all information available publicly, and strong-form efficiency assumes that the stock prices reflect all information, both public and private (CFA Institute). Systematic deviations from these expected return patterns are anomalies of the market. When such deviations are related to certain temporal occurrences, they are divided into calendar anomalies. One of the most prominent of these is the day-of-the-week effect, which assumes that average returns on assets vary systematically depending on the particular trading day, calling into question one of the most basic assumptions of weak-form market efficiency (Adam et al., 2024).

This study examines whether the rapidly growing Vietnamese stock market demonstrated these day-of-the-week anomalies over the period of 2001-2025.

LITERATURE REVIEW

The day of the week effect has been the subject of much study for decades. The most common example is the 'Monday effect' in which average returns on Mondays are significantly lower than on other days. On the other hand, Fridays usually tend to have the greatest returns in most world stock markets. However, according to

studies, there are exceptions in certain markets. For example, in some stock markets there is a 'Tuesday effect' rather than a Monday effect (Aggarwal & Jha, 2023). Because of these differences, many studies are still being conducted on this anomaly across different markets. For instance, Luu, Pham and Pham (2016) examined the effect of the seasonality in the case of VN-Index in Vietnamese stock market from 2006 to 2014. They found definite evidence of seasonality and so that the market is not completely efficient. Building on this, Truong and Friday (2021) conducted an analysis of the stock markets in Vietnam, VN30-Index between the years 2012 and 2019. Their findings indicated a negative return on Mondays, but interestingly enough, this day of the week effect only existed before the introduction of the index futures. Similarly, Tran (2023) investigated the HNX30 and three indices of the HOSE between 2014 and 2021. He found that the day of the week effect influenced these indices on precisely Mondays and Fridays. In an interesting contrast to the typical market patterns, Tran noted the greatest returns on Mondays, as the lowest volatility for all three HOSE indices was consistently seen on Fridays.

One of the limitations of the existing literature on the Vietnamese market is that it is based on limited and short-term data. To overcome this, the present study uses a large dataset (25 years) of the VN-Index from 2001 to 2025. Analyzing this long-term data helps to obtain a much clearer picture of market efficiency over time. The empirical results from the OLS regression indicate the existence of calendar anomalies even for a 25-year period. Most notably, the data shows a statistically significant negative return on Mondays, combined with very different positive day of the week effects occurring on Wednesdays and Fridays.

METHODOLOGY

This paper examines the day-of-the-week anomaly using the VN-Index, the main benchmark of the Ho Chi Minh City Stock Exchange (HOSE) in Vietnam. The data is sourced from Investing.com and consists of daily closing prices between January 1, 2001, and December 31, 2025. This endpoint represents the most recently completed full calendar year of historical data prior to the study's completion in early 2026, ensuring no partial-year biases or simulated projections are included. While Investing.com was utilized as the primary data aggregator for accessibility, data integrity was cross-verified using multiple financial data providers to ensure strict consistency with the official historical records maintained by HOSE. This timeframe provides a robust sample of 6,127 daily trading observations.

In order to prepare the data for analysis, the daily closing prices were converted into daily market returns. Following standard financial methodology, the day-to-day return for the VN-Index is determined based on the natural logarithm of the ratio of the prices at two consecutive trading days. The formula is written as follows:

$R_t = \ln(P_t/P_{t-1})$

Where,

R_t : represents the daily return on day t,

P_t : represents the closing price of the VN-Index on day t,

P_{t-1} : represents the closing price on the preceding trading day of VN-Index.

OLS Model

To test for the existence of the day of the week effect in the Vietnamese stock market, this study employs an Ordinary Least Squares (OLS) regression model. Since the days of the week are categorical data, dummy variables are utilized to represent each trading day.

To avoid the statistical issue of perfect multicollinearity (commonly known as the dummy variable trap), one trading day must be excluded from the model to serve as the benchmark. In this study, Monday is excluded and acts as the baseline intercept. The regression equation is formulated as follows:

$R_t = \beta_0 + \beta_1 D_{Tue,t} + \beta_2 D_{Wed,t} + \beta_3 D_{Thu,t} + \beta_4 D_{Fri,t} + \epsilon_t$

Where,

R_t : represents the logarithmic return of the VN-Index on the day t,

β_0 : represents the intercept, which represents the mean return on Mondays,

β_1 : represents the regression coefficients for Tuesday,

β_2: represents the regression coefficients for Wednesday,

β_3 : represents the regression coefficients for Thursday,

β_4 : represents the regression coefficients for Friday.

These coefficients measure the difference in average returns between each specific day and Monday. $D_{Tue,t}$ through $D_{Fri,t}$ represents the dummy variables, for example, $D_{Tue,t}$ equals 1 if day t is a Tuesday, and 0 otherwise. ϵ_t represents the standard error.

Using this model, the study tests the null hypothesis (H_0) against the alternative hypothesis (H_1):

H_0 : There is no day of the week effect (average returns do not systematically differ by day).

H_1 : At least one day shows a statistically significant difference in returns compared to Monday.

FINDINGS

Descriptive Statistics

Table 1. Descriptive Statistics of Daily Returns by Day of the Week (2001–2025)

Statistics	Monday	Tuesday	Wednesday	Thursday	Friday
Count	1221	1194	1257	1202	1253
Mean	-0.00105	-0.00022	0.00121	0.00046	0.00129
Standard Deviation	0.01668	0.01393	0.01414	0.01307	0.01366
Minimum	-0.07141	-0.06649	-0.07656	-0.06910	-0.06752
Maximum	0.06656	0.04702	0.06635	0.06547	0.06402

Table 1 shows the descriptive summary statistics for the daily logarithmic returns of the VN-Index over the 25year sample period, with 6,127 total observations. An initial look at the mean returns shows a clear calendar trend consistent with traditional theories of anomalies. Notably, the only trading day that shows a negative average return (-0.105%) is Monday, which gives preliminary, unadjusted evidence of the Monday effect. Conversely, mid-to late-week days show strong positive momentum, with Wednesday and Friday showing the highest average returns of 0.121% and 0.129%, respectively. Furthermore, based on an analysis of the standard deviation, it can be seen that Monday is the most volatile trading day of the week (1.668% versus 1.307% for Thursday, the least volatile day). While these summary statistics provide a basic understanding of the data distribution, formal OLS regression is necessary to confirm the statistical significance of these mean differences.

Table 2. Robust OLS Regression Results for the VN-Index (2001–2025)

Variables	Coefficient	Robust Std. Error	t-Statistic	p-value
Intercept (Monday)	-0.00105	0.00048	-2.194	0.0283**
Tuesday	0.00083	0.00062	1.330	0.1835
Wednesday	0.00226	0.00062	3.632	< 0.001***
Thursday	0.00151	0.00061	2.486	0.0129**
Friday	0.00233	0.00061	3.801	< 0.001***

Notes: Asterisks denote statistical significance levels where ** indicates $p < 0.05$, and *** indicates $p < 0.01$. Results are based on White's heteroskedasticity-consistent standard errors.

Model diagnostics: Observations 6,127; Adjusted R-squared= 0.0031; F-statistic = 5.839 ($p < 0.001$).

The results of the OLS regression that were used to investigate the day of the week effect on the VN-Index for 2001-2025 are presented in Table 1. The overall regression model is statistically significant (F-statistic = 5.839, $p < 0.001$). This affirms the significance of calendar days on stock market returns and hence allows the null hypothesis to be rejected in this instance.

Because Monday was omitted from the dummy variables in order to act as the baseline, in the regression output 'Intercept' is the average return for Mondays. The results show that the coefficient is -0.00105 and the p-value is 0.0283. Because this p-value is under the common threshold of 0.05, it shows a statistically significant negative return on Mondays. This suggests very strong empirical evidence that the traditional 'Monday effect' is very persistent in the Vietnamese stock market.

Furthermore, the regression output shows significant positive anomalies for other days of the week. The coefficients for Wednesday (0.0023), Thursday (0.0015) and Friday (0.0023) are all positive and highly statistically significant. Wednesday and Friday have the highest positive impacts ($p < 0.001$) suggesting that average returns on these days are significantly higher than on Mondays. In contrast, the Tuesday coefficient is not also statistically significant ($p = 0.1835$), so Tuesday returns are not significantly different from Monday returns.

Ultimately, these findings validate that the Vietnamese stock market is characterized by distinct and predictable patterns of returns depending on the day of the week which implies a slight departure from weak-form market efficiency.

Robustness Checks: Sub-Period Analysis

To further validate our findings and confirm that our results are not merely driven by isolated market shocks or structural changes, we conducted a sub-period analysis by splitting our main sample. The Vietnamese equity market, like all global markets, experienced unprecedented volatility during the COVID-19 pandemic. Consequently, we segregated our primary dataset into a 'pre-COVID' period (January 2001 - December 2019) and a 'post-COVID' period (January 2020 - December 2025). This partition allows us to examine the persistence of the day-of-the-week effect across distinct market regimes and determine if the anomaly intensified or diminished following the pandemic shock. Table 3 presents the sub-period regression findings, highlighting the relative stability of calendar patterns over time.

Table 3. Sub-Period Robust OLS Regression Results (pre-COVID vs. post-COVID)

Variables	**pre-Covid**	**post-Covid**
Observations	4628	1499
Multiple R	0.06791	0.12271
R-Square	0.00461	0.01506
Adjusted R-Square	0.00375	0.01242
Standard Error	0.01478	0.01287
F-Statistics	5.35510***	5.71042***
Significance F	0.00027	0.00015
Intercept (Monday)	-0.00068 (p-value = 0.2193)	-0.00220** (p-value = 0.0192)
Tuesday	-0.00024 (p-value = 0.7430)	0.00406*** (p-value < 0.001)

Wednesday	0.00157** (p-value = 0.0326)	0.00442*** (p-value < 0.001)
Thursday	0.00116 (p-value = 0.1012)	0.00263** (p-value = 0.0282)
Friday	0.00246*** (p-value < 0.001)	0.00190* (p-value = 0.0979)

Notes: Asterisks denote statistical significance levels where * indicates $p < 0.10$, ** indicates $p < 0.05$, and *** indicates $p < 0.01$. The pre-COVID period isolates market behavior before the pandemic shock, while the post-COVID period captures the intensified calendar anomalies in recent years.

To check the robustness of the calendar anomalies and make sure that the results are not influenced by extreme market shocks, a sub-period robustness check was performed to isolate the effect of the COVID-19 pandemic. The first sub-period (pre-COVID) analyzes 4,628 daily observations from the years 2001 to 2019. OLS regression for this period provides an F-statistic of 5.355 ($p < 0.001$), which suggests that the overall day-of-the-week effect was very significant before the pandemic. While the Monday baseline return is negative (coefficient = -0.000679), it is not statistically significant in this isolated period ($p = 0.2139$). However, the mid-to late-week positive returns are very strong and statistically significant. Specifically, Wednesday has positive returns significant at the 5% levels of significance ($p = 0.032$). Most notably, the Friday effect is highly significant and positive (coefficient = 0.00246, $p < 0.001$), confirming that strong end-of-week buying momentum was a persistent structural feature of the Vietnamese market prior to 2020.

The second sub-period (post-COVID) deals with the analysis of 1,499 daily observations between 2020 and 2025. The findings show that the day-of-the-week anomaly not only persisted but became even stronger after the pandemic shock (F-statistic = 5.710, $p < 0.001$). Strikingly, the negative Monday effect became highly pronounced and statistically significant at the 1% level (coefficient = -0.00220, $p = 0.019$). Furthermore, the positive market rebound occurred earlier in the week, with Tuesday and Wednesday showing highly significant positive coefficients at the 1% level ($p < 0.001$). This sub-period analysis confirms that the calendar anomalies in the VN-Index are very robust, persistent across different market regimes, and have increased in strength during the post-pandemic era.

Diagnostic Tests for OLS Assumptions

To ensure the reliability of the OLS framework, diagnostic tests for the model's underlying assumptions were conducted. The Durbin-Watson (DW) statistic of 1.533 ($p < 0.001$), similarly, for pre-COVID and post-COVID the DW statistics are 1.4583 ($p < 0.001$) and 1.8353 ($p < 0.001$) respectively that indicates the presence of some positive autocorrelation, which is typical in long-term financial time series. Furthermore, the Breusch-Pagan test yielded a significant result (BP = 36.22, $p < 0.001$), similarly, for pre-COVID and post-COVID the BP are 25.035 ($p < 0.001$) and 20.368 ($p < 0.001$) respectively, confirming the presence of heteroskedasticity. To mitigate these issues and ensure the validity of our inferences, we utilized White's (1980) heteroskedasticity-consistent standard errors. This robust approach confirms that the Monday effect and late-week anomalies remain statistically significant despite non-constant variance.

CONCLUSION AND RECOMMENDATION

This study presents an in-depth empirical analysis of the day-of-the-week effect in the Vietnamese stock market using 25 years of VN-Index data. The results of the Ordinary Least Squares (OLS) regression for the 2001 to 2025 period confirm the existence of a statistically significant Monday effect in the form of negative returns, alongside pronounced positive anomalies on Wednesdays and Fridays. These findings suggest that the Vietnamese stock market does not entirely conform to the weak-form Efficient Market Hypothesis (EMH), as stock returns demonstrate predictable and systematic variations dependent on the calendar day (Thi Du & Xuan Tho, 2023).

Robustness checks performed across sub-periods indicate that the Monday effect, although present, was relatively weaker during the pre-COVID era (2001 to 2019). Conversely, it intensified significantly in the post-COVID period (2020–2025), implying that recent market shocks and the inflow of new retail investors may have amplified these behavioral anomalies rather than dampening them.

Practical Implications

For investors and portfolio managers, these findings offer strategic insights into market timing. Specifically, a "buy on Monday, sell on Friday" strategy may have historically been superior in terms of returns within the Vietnamese context. Moreover, these patterns serve as a signal for policymakers to prioritize market transparency and investor education to improve overall market efficiency.

Limitations and Future Research

Despite the strength of the empirical findings, a key issue remains regarding the practical exploitability of the identified anomalies. Although statistically significant, this study considers raw index returns without accounting for market frictions. In practice, implementing a high-frequency, calendar-based trading strategy would involve significant transaction costs i.e. brokerage commissions, bid-ask spreads and capital gains taxes, which may significantly reduce or eliminate marginal profits.

Future research should, therefore, incorporate simulated transaction costs to determine the net profitability of these strategies. Additionally, future research could explore the interaction between the day-of-the-week effect and other temporal anomalies, such as the "month-of-the-year" effect, as well as conducting comparative analyses across other Vietnamese indices such as the VN30 or HNX, to provide a more holistic understanding of seasonality in emerging frontier markets.

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