

**ANALYSIS OF THE IMPACT OF UNITED STATES IMPORT TARIFF INCREASES ON
ABNORMAL RETURNS AND TRADING VOLUME ACTIVITY OF LQ45 STOCKS LISTED ON THE
INDONESIA STOCK EXCHANGE**

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DOI: <https://doi.org/10.35145/procuratio.v14i2.6034>

Received: 28/07/2026, Revised: -, Accepted: 31/7/2026

ABSTRACT

This study examines the impact of the United States' import tariff policies on Abnormal Return (AR) and Trading Volume Activity (TVA) in the Indonesian capital market. The analysis focuses on two major trade policy events: the implementation of a 10% import tariff on Chinese goods on February 4, 2025, and the imposition of reciprocal import tariffs on 57 countries, including Indonesia, on April 2, 2025. This study employs secondary data consisting of historical stock prices of companies included in the LQ45 Index and listed on the Indonesia Stock Exchange (IDX) during the period from February to July 2025. An event study methodology is applied to examine market reactions by measuring Abnormal Return and Trading Volume Activity within the event window surrounding each policy announcement. Statistical analysis is conducted using the One-Sample t-test to identify the presence of abnormal returns around the event dates and the Paired Sample t-test to compare market conditions before and after each event. The results reveal the existence of significant abnormal returns during several days surrounding both tariff announcements, indicating that investors responded to the information released to the market. However, the paired sample t-test shows no significant differences in the average Abnormal Return or Trading Volume Activity between the pre-event and post-event periods for either event. These findings suggest that the Indonesian capital market reacted to the tariff announcements only in the short term, with no persistent impact on stock returns or trading activity.

Keywords: Abnormal Return; Trading Volume Activity; Event Study

***ANALISIS DAMPAK PENINGKATAN TARIF IMPOR AMERIKA SERIKAT TERHADAP ABNORMAL
RETURN DAN AKTIVITAS VOLUME PERDAGANGAN SAHAM LQ45 YANG TERDAFTAR DI BURSA
EFEK INDONESIA***

ABSTRAK

Penelitian ini dilakukan untuk menganalisis dampak kebijakan kenaikan tarif impor yang diberlakukan oleh Amerika Serikat terhadap Abnormal Return dan Trading Volume Activity (TVA). Pengujian difokuskan pada 2 peristiwa utama, yaitu diberlakukan tarif impor 10% Amerika Serikat kepada China pada 4 Februari 2025, dan diberlakukan tarif impor kepada 57 negara, Indonesia salah satunya pada 2 April 2025. Data yang digunakan merupakan data sekunder berupa harga saham historis perusahaan yang tergabung dalam indeks LQ-45 selama periode Februari hingga Juli 2025 yang tercatat di Bursa Efek Indonesia. Metode analisis yang diterapkan adalah event study untuk mengukur Abnormal Return dan Trading Volume Activity di sekitar tanggal peristiwa, dengan pengujian statistik menggunakan paired sample t-test guna membandingkan kondisi sebelum dan sesudah kejadian. Temuan penelitian menunjukkan adanya Abnormal Return pada periode pengamatan di sekitar peristiwa. Namun demikian, hasil uji perbedaan tidak menemukan perubahan yang signifikan pada rata-rata Abnormal Return maupun Trading Volume Activity antara periode sebelum dan sesudah kedua peristiwa perang dagang tersebut. Hal ini mengindikasikan bahwa reaksi pasar yang muncul cenderung bersifat sementara dan tidak berlanjut dalam jangka yang lebih panjang.

Kata Kunci: Abnormal Return; Trading Volume Activity; Event Study

INTRODUCTION

Economic growth is one of the primary indicators reflecting a country's ability to improve societal welfare and sustain long-term development. Every nation faces limitations in natural resources, technology, labor, and specialized expertise. Therefore, achieving sustainable economic growth requires interaction with the global economy. One of the most important forms of this interaction is international trade, which enables countries to obtain goods, services, and technologies that cannot be produced domestically or can only be produced at a higher cost. Through international trade, cross-border economic relationships are established, promoting productivity, efficiency, and market expansion for domestic products. Although international trade is not the sole determinant of economic growth, openness to the flow of goods, services, and capital generally makes a significant contribution to accelerating economic growth, expanding investment opportunities, and enhancing the competitiveness of domestic industries in an increasingly competitive global market.

Imports and exports are the two main components of international trade and serve as key drivers of a country's economic growth. Through these activities, countries are able to capitalize on their comparative advantages by obtaining goods and services that are either unavailable or inefficient to produce domestically. Consequently, import and export activities not only expand market access and enhance competitiveness but also contribute significantly to increases in Gross Domestic Product (GDP), which is widely recognized as a key indicator of national economic performance. To safeguard national interests and protect domestic industries, governments commonly implement various trade policy instruments, including import tariffs, import quotas, and bilateral or multilateral trade agreements. A country's trade policies not only affect its domestic economy but also influence the stability and interconnectedness of the global economy. For example, an increase in import tariffs imposed by the United States may reduce the competitiveness of Indonesian export products, decrease foreign exchange earnings, and place pressure on labor-intensive industries such as textiles. These changes may result in large-scale layoffs and weaken the Indonesian rupiah, thereby slowing national economic growth, either directly or indirectly (Pratama & Mulianta, 2025).

Following Donald Trump's inauguration as the 45th President of the United States on January 20, 2017, in Washington, D.C. (RH, 2017), the U.S. administration increasingly adopted protectionist trade policies aimed at reducing the country's trade deficit and protecting domestic industries. President Trump openly criticized trading partners that recorded substantial trade surpluses with the United States, particularly China, and began imposing new import tariffs on a wide range of products early in his administration. This policy stance indicates that the persistent U.S. trade deficit was the primary motivation behind the introduction of new tariffs, targeting not only China but also several developing countries, including Indonesia.

According to data from Databoks covering the 2020–2024 period, the United States recorded its largest trade deficit with China, amounting to US\$319.1 billion, followed by Mexico (US\$175.9 billion) and Vietnam (US\$129.4 billion). Several developed economies, including Germany, Ireland, Taiwan, Canada, Japan, and South Korea, also recorded significant trade surpluses with the United States. Within Southeast Asia, Indonesia ranked among the countries contributing to the U.S. trade deficit, with a deficit of US\$19.3 billion, below Malaysia (US\$26.1 billion) and Thailand (US\$48.3 billion). Although Indonesia's trade surplus with the United States is considerably smaller than those of China or Mexico, it has nevertheless attracted attention within U.S. protectionist trade policies aimed at reducing the country's trade deficit.

Furthermore, the United States has consistently experienced a trade deficit with Indonesia over the past five years. In 2020, U.S. imports from Indonesia reached US\$21.3 billion, while exports to Indonesia totaled only US\$7.4 billion, resulting in a trade deficit of US\$13.9 billion. The deficit increased to US\$19.6 billion in 2021 and peaked at US\$27.3 billion in 2022, when U.S. imports from Indonesia rose to US\$37.3 billion while exports remained at approximately US\$10 billion. Although the deficit declined to US\$18.2 billion in 2023, it widened again to US\$19.3 billion in 2024, with imports reaching US\$29.5 billion and exports totaling US\$10.2 billion. These figures indicate that Indonesia has consistently maintained a trade surplus with the United States.

On February 1, 2025, President Donald Trump announced a new import tariff policy under which goods imported from Mexico and Canada were subject to a 25% tariff, while selected products imported from China faced an additional 10% tariff. The primary objectives of this policy were to reduce the U.S. trade deficit and strengthen domestic industries. Subsequently, on March 4, 2025, the United States reaffirmed and expanded these tariff measures by applying the 25% tariff more broadly to imports from Canada and Mexico while imposing stricter restrictions on certain Chinese products. These developments suggest that U.S. protectionist trade policies were not temporary measures but rather part of a longer-term strategy. For Indonesia, such policies may lead to shifts in export and import markets, changes in international prices, and the need for new strategies to maintain the competitiveness of Indonesian products in the global market. In other words, the U.S. tariff policy illustrates how the trade policy of a major economy can significantly influence global trade patterns (Handoyo, 2025).

Unlike the previous measures, on April 2, 2025, the United States directly targeted Indonesia by announcing a 32% reciprocal tariff on selected Indonesian export products, which took effect on April 9, 2025. In response, the Indonesian government, through the Coordinating Ministry for Economic Affairs, promptly introduced several strategic measures, including strengthening communication with U.S. authorities, maintaining

the stability of the Indonesian rupiah, and supporting foreign exchange liquidity to mitigate the potential adverse effects of the policy on the national economy. This development provides a clear example of how international trade policies can directly affect Indonesia and underscores the importance of timely and appropriate government responses (Melani, 2025a).

The series of tariff policies imposed by the United States on various countries, including Indonesia, has affected not only international trade but also the capital market. According to Abdul Hamid (2020), the capital market is a marketplace where parties with surplus funds meet those requiring funds through the trading of securities. It can also be defined as a market for long-term financial instruments, such as stocks and bonds, which generally have maturities exceeding one year. The capital market plays a crucial role in economic development, as it serves as an important indicator of a country's economic progress while simultaneously supporting economic growth. This is because the capital market performs two essential functions: providing companies with access to financing through public investment and offering investors opportunities to allocate their funds productively. In the context of tariff-related events, increasing global uncertainty tends to influence investor sentiment, which is reflected in fluctuations in stock prices, market indices, and foreign capital flows. Furthermore, Pitoy et al. (2022) stated that developments in trading activity within the capital market can be observed through the Composite Stock Price Index (CSPI). The CSPI measures the performance of all stocks listed on the Indonesia Stock Exchange (IDX) and provides historical information on the movements of aggregate stock prices up to a particular point in time.

The movement of the Composite Stock Price Index (CSPI) during the period from September 4, 2023, to September 3, 2025, indicates that the index remained relatively stable within the range of 6,700–7,200 throughout late 2023 and early 2024 before experiencing several periods of fluctuation that can be associated with global economic developments, particularly the tariff policies implemented by the United States and China. Toward the end of 2024 and the beginning of 2025, the CSPI experienced a substantial decline, coinciding with the escalation of trade tensions as the United States expanded tariffs on imports from Canada, Mexico, and China, and subsequently imposed tariffs on Indonesian products on April 2, 2025. Rising global uncertainty and concerns over declining export performance prompted investors to adopt a more cautious stance, leading to increased selling pressure and a weakening of the stock market index. However, following the agreement reached between the United States and China on May 14, 2025, to reduce tariffs for a 90-day period, market sentiment improved considerably. The CSPI gradually recovered and approached the 8,000-point level, reflecting renewed foreign capital inflows and growing investor optimism that trade tensions would ease. These developments demonstrate that the Indonesian stock market is highly sensitive to global economic events. Consequently, the movement of the CSPI illustrates the close relationship between external factors, particularly U.S.–China trade policies, and the performance of Indonesia's domestic capital market, highlighting the importance of these developments for both investors and policymakers.

Similarly, the LQ45 Index, which consists of the 45 most liquid and largest-capitalization companies listed on the Indonesia Stock Exchange, exhibited a comparable pattern during the same period. Throughout late 2023 and early 2024, the LQ45 Index remained relatively stable within the range of 900–1,000, even approaching the 1,000-point level due to positive market sentiment. However, during the second half of 2024, the index gradually declined below 900. This downward trend continued into early 2025 as trade tensions intensified following the expansion of U.S. tariff policies toward Canada, Mexico, China, and eventually Indonesia. When the United States announced a 32% reciprocal tariff on selected Indonesian exports on April 2, 2025, negative sentiment within Indonesia's capital market intensified. Because the LQ45 Index comprises leading companies, many of which are either export-oriented or dependent on imported raw materials, investors became increasingly concerned about declining corporate profitability and financial performance. As a result, many investors sold their holdings, causing the index to fall further to approximately 700–750 points by mid-2025.

The movements of both the CSPI and the LQ45 Index indicate that changes in international trade policies, particularly the trade conflict between the United States and China, significantly influenced investor sentiment in the Indonesian capital market. These changes were reflected not only in fluctuations in market indices but also in stock trading behavior. To verify the impact of the trade war and evaluate the Indonesian capital market's response, this study employs the event study methodology. This approach enables researchers to examine market reactions following a confirmed event by observing indicators such as abnormal returns and Trading Volume Activity (TVA).

Previous studies have extensively applied the event study approach to analyze market reactions to major events. Amin (2022), for example, investigated PT Kalbe Farma Tbk, a pharmaceutical company listed on the Indonesia Stock Exchange, by examining Trading Volume Activity (TVA) before and after dividend announcements during the COVID-19 pandemic. The findings revealed a significant difference in abnormal returns before and after the dividend announcement, whereas Trading Volume Activity (TVA) showed no significant difference.

Similarly, Qisthi et al. (2025) examined companies included in the LQ45 Index during the February–July 2024 period surrounding the announcement of Indonesia's 2024 general election results. The study found that abnormal returns did not differ significantly before and after the announcement, whereas Trading Volume Activity

(TVA) exhibited a significant difference, indicating that the election results influenced stock trading activity among LQ45-listed companies.

Furthermore, Rooroh and Dewi (2024) investigated stock market reactions to layoff announcements made by publicly listed Indonesian companies between 2020 and 2022. Their study analyzed 13 listed companies across various industries and found that most firms did not experience significant differences in abnormal returns following the layoff announcements. In contrast, significant changes in Trading Volume Activity (TVA) were observed in only two companies, namely HMSP and GIAA. Specifically, HMSP experienced a decline in trading volume after the layoff announcement, whereas GIAA recorded an increase in trading activity.

LITERATURE REVIEW

Financial Management

Financial management is the process of planning, organizing, directing, and controlling financial activities, including the acquisition and utilization of corporate funds (Astuti et al., 2022).

Efficient Market Hypothesis (EMH)

The Efficient Market Hypothesis (EMH) explains how financial markets respond to new information, causing security prices to adjust rapidly toward a new equilibrium (Sari, 2022).

Signaling Theory

According to Apriada et al. (2024), Signaling Theory explains how management conveys information regarding the company's future growth prospects to investors. These signals influence investors' perceptions and ultimately affect their investment decisions.

Capital Market

According to Pitoy et al. (2022), the capital market serves as an essential component of the economy by facilitating the mobilization of funds from investors to productive sectors, thereby supporting economic growth.

Stock

According to Dzakkiansyah et al. (2022), stocks represent ownership in a company and constitute one of the most attractive investment instruments in the capital market. Therefore, evaluating stock prices is an important consideration before making investment decisions.

Event Study

An event study is one of the most widely used analytical approaches in financial research to examine market reactions to specific events or announcements (Rosman & Yudanto, 2022).

Abnormal Return

According to Nababan et al. (2024), abnormal return refers to the difference between the actual return earned by investors and the expected return that would normally be anticipated under ordinary market conditions.

Trading Volume Activity (TVA)

According to Nababan et al. (2024), Trading Volume Activity (TVA) is an indicator used to assess capital market reactions to new information by measuring changes in stock trading volume. Trading volume reflects the intensity of investors' buying and selling activities following the release of new information.

Hypothesis Development

The hypotheses of this event study are developed based on the assumption that the capital market reacts to new information, including the announcement of import tariff policies imposed by the United States. Accordingly, the following hypotheses are proposed:

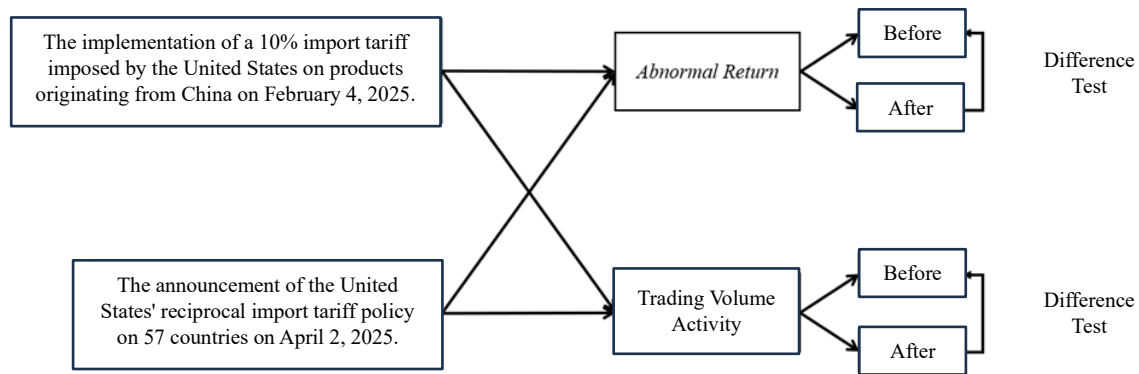
H1: There is a significant abnormal return around the import tariff announcement.

H2: There is a significant difference in abnormal returns before and after the import tariff announcement.

H3: There is a significant difference in Trading Volume Activity (TVA) before and after the import tariff announcement.

Conceptual Framework

Based on the theoretical foundation and the proposed hypotheses, the conceptual framework of this study is presented in Figure 1.



Source: Previous research articles, 2025

Figure 1. Conceptual Framework

RESEARCH METHODOLOGY

Data Type and Data Source

This study utilizes secondary data consisting of historical stock market information of companies included in the LQ45 Index listed on the Indonesia Stock Exchange (IDX). The data collected include daily highest prices, lowest prices, closing prices, and trading volumes. The data were obtained from Investing.com and the official website of the Indonesia Stock Exchange (IDX).

Population and Sample

The population of this study consists of companies included in the LQ45 Index listed on the Indonesia Stock Exchange (IDX). The sample comprises LQ45 Index companies listed on the IDX during the period of February 2025 to July 2025. The LQ45 Index was selected because its constituent stocks are highly liquid, actively traded, and supported by strong fundamentals, making them appropriate for measuring market reactions to specific events using daily stock market data.

Data Analysis Technique

This study employs the event study method to analyze the impact of the selected events on the capital market. The observation period consists of an estimation period and an event window. The estimation period covers 60 trading days prior to the event window. The event windows are based on two major events: (1) the implementation of the 10% U.S. import tariff on Chinese products on February 4, 2025, and (2) the announcement of the U.S. reciprocal import tariff policy affecting 57 countries on April 2, 2025.

To identify differences in stock returns, abnormal returns, and trading volume activity (TVA) before and after each event, this study applies a difference test. Prior to hypothesis testing, the data are examined for normality. If the data are normally distributed, the differences are analyzed using the paired-sample t-test. Otherwise, the Wilcoxon Signed-Rank Test, a non-parametric statistical test, is employed.

Hypothesis Testing

Hypothesis testing is conducted to examine the existence of abnormal returns and trading volume activity (TVA) before and after the implementation of the U.S. import tariff policy. The abnormal return is calculated using the following formula:

$$AR_{it} = R_{it} - E(R_{it})$$

Where:

AR_{it} = Abnormal return of stock i at time t

R_{it} = Actual return of stock i at time t

$E(R_{it})$ = Expected return of stock i at time t

Actual Return

$$R_{it} = \frac{P_t - P_{t-1}}{P_{t-1}}$$

Where:

R_{it} = Actual return of stock i during period t

P_t = Closing price at period t

P_{t-1} = Closing price at period $t-1$

Expected Return

The expected return is estimated using the Single Index Market Model. Historical data from the estimation period are employed to estimate the expected return during the event window, using the following equation:

$$E(R_{it}) = \alpha_i + \beta_i R_{mt}$$

Where:

$E(R_{it})$ = Expected return of stock i during period t

R_{mt} = Market return during period t

The coefficients α and β are estimated using time-series regression between the stock return (R_{it}) and the market return (R_{mt}). These coefficients are subsequently used to calculate the expected return for each stock.

Market Return

Market return is calculated using the Composite Stock Price Index (IHSG) as follows:

$$R_{mt} = \frac{IHSG_t - IHSG_{t-1}}{IHSG_{t-1}}$$

Where:

R_{mt} = Market return during period t

$IHSG_t$ = Composite Stock Price Index at period t

$IHSG_{t-1}$ = Composite Stock Price Index at period $t-1$

Average Abnormal Return

The Average Abnormal Return (AAR) is calculated as follows:

$$AAR_t = \frac{\sum_{i=1}^n AR_{it}}{n}$$

Where:

AAR_t = Average abnormal return during period t

AR_{it} = Abnormal return of stock i during period t

n = Number of sample firms

Cumulative Average Abnormal Return (CAAR)

The Cumulative Average Abnormal Return (CAAR) is calculated as:

$$CAAR = \sum AAR_t$$

Where:

$CAAR$ = Cumulative Average Abnormal Return

AAR_t = Average abnormal return during period t

Standard Deviation

The standard deviation of abnormal returns is calculated using the following formula:

$$\sigma_{ie} = \sqrt{\frac{\sum (AR_{it} - AAR_t)^2}{n - 1}}$$

Where:

σ_{ie} = Standard deviation of abnormal returns

AR_{it} = Abnormal return of stock i

AAR_t = Average abnormal return

n = Number of sample firms

Standardized Abnormal Return (SAR)

The Standardized Abnormal Return (SAR) is calculated as:

$$SAR_{it} = \frac{AR_{it}}{\sigma_{ie}}$$

Where:

SAR_{it} = Standardized abnormal return of stock i during period t

AR_{it} = Abnormal return of stock i

σ_{ie} = Standard deviation of abnormal returns

One Sample t-test

The significance of abnormal returns is tested using the one-sample *t*-test:

$$t = \frac{\sum SAR_{it}}{\sqrt{n}}$$

Where:

$\sum SAR_{it}$ = Sum of standardized abnormal returns

n = Number of sample firms

Hypothesis II

Hypothesis II examines whether there is a significant difference in the average abnormal returns before and after the implementation of the U.S. import tariff policy. The statistical test is conducted using the following procedure:

Average Abnormal Return

Before the event

$$AAR_{before} = \frac{\sum_{t=-3}^{-1} AR_t}{n}$$

After the event

$$AAR_{after} = \frac{\sum_{t=+1}^{+3} AR_t}{n}$$

Description:

AAR_{before} = Average Abnormal Return before the event

AAR_{after} = Average Abnormal Return after the event

AR_t = Abnormal Return on day t

n = Number of observation days

Standar Deviation

Before the event

$$\sigma_{before} = \sqrt{\frac{\sum_{t=-3}^{-1} (AR_t - AAR_{before})^2}{(n-1)}}$$

After the event

$$\sigma_{after} = \sqrt{\frac{\sum_{t=+1}^{+3} (AR_t - AAR_{after})^2}{(n-1)}}$$

Description:

σ_{before} = Standard deviation of abnormal returns before the event

σ_{after} = Standard deviation of abnormal returns after the event

AR_t = Abnormal Return on day t

AAR_{before} = Average Abnormal Return before the event

AAR_{after} = Average Abnormal Return after the event

n = Number of observation days

T-test ($\alpha = 5\%$)

To examine whether there is a significant difference in the Average Abnormal Return before and after the event, a paired sample *t*-test was employed for normally distributed data. The test statistic is calculated using the following formula.

$$t = \frac{AAR_{after} - AAR_{before}}{\sqrt{\frac{\sigma_{after}^2}{n} + \frac{\sigma_{before}^2}{n}}}$$

Hypothesis III

Hypothesis III testing is conducted to examine whether there is a difference in Trading Volume Activity (TVA) before and after the increase in import tariffs imposed by the United States. The formulas used are as follows:

Trading Volume Activity (TVA)

$$TVA = \frac{\sum \text{Shares of company } i \text{ traded at time } t}{\sum \text{Outstanding shares of company } i \text{ at time } t}$$

Average Trading Volume Activity (ATVA)

$$\overline{TVA} = \frac{\sum_{t=1}^n TVA}{n}$$

Where:

$\overline{TVA}$ = Average Trading Volume Activity of the stock during period t

TVA = Trading Volume Activity of stock i during period t

n = Observation period

Standard Deviation

$$\sigma_{ie} = \sqrt{\frac{\sum (TVA - \overline{TVA})^2}{n - 1}}$$

Where:

σ_{ie} = Standard deviation of security i

$\overline{TVA}$ = Average Trading Volume Activity during period t

TVA = Trading Volume Activity of stock i during period t

n = Observation period

Standardized Trading Volume Activity (TVA)

$$STVA_{nt} = \frac{TVA_{it}}{\sigma_{ie}}$$

Where:

$STVA_{nt}$ = Standardized Trading Volume Activity of stock during period t

TVA_{it} = Trading Volume Activity of stock i during period t

σ_{ie} = Standard deviation of security i

One Sample t-test

$$t = \frac{\sum STVA_{nt}}{\sqrt{n}}$$

Where:

$\sum STVA_{nt}$ = Total Standardized Trading Volume Activity during period t

n = Number of samples

Average Trading Volume Activity (ATVA)

Before the event

$$\overline{TVA}_{before} = \frac{\sum_{t=-3}^{t=-1} TVA_{before}}{n}$$

After the event

$$\overline{TVA}_{after} = \frac{\sum_{t=+1}^{t=+3} TVA_{after}}{n}$$

Standard Deviation

Before the event

$$\sigma_{before} = \sqrt{\frac{\sum_{t=-3}^{t=-1} (TVA_{before} - \overline{TVA}_{before})^2}{(n - 1)}}$$

After the event

$$\sigma_{after} = \sqrt{\frac{\sum_{t=+1}^{t=+3} (TVA_{after} - \overline{TVA}_{after})^2}{(n - 1)}}$$

Statistical Test ($\alpha = 5\%$)

$$t = \frac{\overline{TVA}_{after} - \overline{TVA}_{before}}{\sqrt{\frac{\sigma_{after}^2}{n} + \frac{\sigma_{before}^2}{n}}}$$

RESULTS AND DISCUSSION**Data Analysis**

The data analysis in this study was conducted separately for each event to obtain more specific and comprehensive findings. This approach allows each event to be examined independently, enabling a more detailed interpretation before drawing the overall conclusions. Prior to hypothesis testing, a normality test was performed to determine whether the data followed a normal distribution. A dataset is considered normally distributed when its values are symmetrically distributed around the mean without significant skewness. In this study, the normality test was conducted using the Kolmogorov–Smirnov (K–S) test with the assistance of SPSS software as shown in Table 1.

This study employs two main variables to examine the stock market's reaction to the United States import tariff policies implemented in 2025: Average Abnormal Return (AAR) and Average Trading Volume Activity (ATVA). AAR measures whether the actual stock return on a particular day differs from the expected return under normal market conditions, while ATVA reflects the intensity of stock trading activity among investors.

Specifically, AAR_4FEB and ATVA_4FEB represent the market reaction to the implementation of the 10% U.S. import tariff on Chinese products on February 4, 2025. Meanwhile, AAR_2APR and ATVA_2APR capture the market response to the U.S. reciprocal tariff policy imposed on 57 countries, including Indonesia, on April 2, 2025. These variables enable the study to evaluate whether investors responded to the tariff announcements through changes in stock returns and trading activity.

Table 1. Results of the Normality Test

One-Sample Kolmogorov-Smirnov Test					
		AAR_4Feb	ATVA_4Feb	AAR_2Apr	ATVA_2Apr
N		6	6	6	6
Normal Parameters ^{a,b}	Mean	-.0059	.1040	.0043	.0716
	Std. Deviation	.00893	.07727	.04270	.03230
Most Extreme Differences	Absolute	.272	.373	.256	.351
	Positive	.272	.373	.154	.220
	Negative	-.163	-.248	-.256	-.351
Kolmogorov-Smirnov Z		.667	.913	.628	.861
Asymp. Sig. (2-tailed)		.765	.375	.826	.449
a. Test distribution is Normal.					
b. Calculated from data.					

Source: Processed secondary data, 2025

Based on the results of the One-Sample Kolmogorov–Smirnov normality test presented in Table 1, all variables are normally distributed. This is indicated by the Asymp. Sig. (2-tailed) values, all of which exceed the significance level of 0.05. Specifically, the significance values are 0.765 for AAR_4FEB, 0.375 for ATVA_4FEB, 0.826 for AAR_2APR, and 0.449 for ATVA_2APR. Since all p-values are greater than 0.05, the data satisfy the normality assumption, indicating that the observations are approximately normally distributed. Consequently, the data are appropriate for further analysis using parametric statistical techniques.

To examine the impact of the U.S. import tariff policies on the Indonesian stock market, this study adopts the event study methodology. This approach is designed to investigate market reactions before and after a specific event by analyzing changes in Abnormal Return (AR) and Trading Volume Activity (TVA) around the event date. A statistically significant abnormal return indicates that investors responded to the event and that the information contained in the announcement was reflected in stock prices. Furthermore, if the average abnormal return after the event is significantly higher than before the event, the tariff policy can be interpreted as having a positive impact on stock performance. Conversely, a lower post-event abnormal return suggests that the event generated a negative market reaction.

Hypothesis Testing

Hypothesis 1 examines whether abnormal returns exist around the implementation of the U.S. import tariff policies. Two major events are analyzed: (1) the implementation of the 10% U.S. import tariff on Chinese products on February 4, 2025, and (2) the implementation of U.S. reciprocal tariffs on 57 countries, including Indonesia,

on April 2, 2025. To test this hypothesis, a one-sample t-test was employed, and the results are presented in Table 2.

Table 2. One-Sample t-Test Results for Abnormal Return

Period	AAR	Sig. (2-tailed)	Result
Implementation of 10% import tariff by United States on China			
t+3	0.41625	0.01417	SIG
t+2	-0.53705	0.00115	SIG
t+1	-0.12768	0.29054	T.SIG
t-1	-0.52886	0.00005	SIG
t-2	0.04325	0.73697	T.SIG
t-3	-0.47659	0.00032	SIG
Implementation of import tariff on 57 countries, including Indonesia			
t+3	2.19586	0.00000	SIG
Implementation of import tariff on 57 countries, including Indonesia			
t+2	0.07797	0.75355	T.SIG
t+1	-2.62914	0.00000	SIG
t-1	-0.14704	0.26856	T.SIG
t-2	0.97756	0.00000	SIG
t-3	0.68947	0.00047	SIG

Source: Processed secondary data, 2025

Based on the results of the One-Sample t-test on the Average Abnormal Return (AAR) of stocks included in the LQ45 Index, it can be observed that the market reacted differently before and after the implementation of the U.S. import tariff policies. The test was conducted over an event window consisting of three trading days before the event (t-3, t-2, and t-1) and three trading days after the event (t+1, t+2, and t+3) to determine whether significant changes in abnormal returns occurred.

For the event concerning the implementation of the 10% U.S. import tariff on Chinese products, the test results indicate that significant abnormal returns were observed on t+3, t+2, t-1, and t-3, as the significance values were below the 0.05 level. In contrast, the abnormal returns on t+1 and t-2 were not statistically significant because their significance values exceeded 0.05. These findings suggest that the market responded relatively strongly to the event, particularly in the days preceding and following the implementation of the policy, although not all observation periods exhibited significant market reactions.

Furthermore, for the event involving the U.S. reciprocal tariff policy imposed on 57 countries, including Indonesia, the test results reveal significant abnormal returns on t+3, t+1, t-2, and t-3, with significance values below 0.05. However, abnormal returns on t+2 and t-1 were not statistically significant. This indicates that the market also responded considerably to this policy, particularly during the pre-event period and several days after the announcement. Nevertheless, the market reaction was not consistently observed across all event windows.

Overall, these findings demonstrate that both U.S. import tariff events generated measurable reactions in the Indonesian capital market, as reflected by the presence of significant abnormal returns during several periods before and after the events. However, these reactions were not consistent across all observation days, suggesting that investor responses fluctuated depending on the timing of the observation period.

Hypothesis 2 examines whether there is a significant difference in Abnormal Return before and after the implementation of the U.S. import tariff policies. The analysis covers two policy events: (1) the implementation of the 10% U.S. import tariff on Chinese products on February 4, 2025, and (2) the implementation of U.S. reciprocal tariffs on 57 countries, including Indonesia, on April 2, 2025. Based on the results of the normality test, the Abnormal Return and Trading Volume Activity data were found to be normally distributed. Therefore, the subsequent analysis was conducted using the paired-sample t-test. The results of the analysis are presented in Table 3.

Table 3. Paired-Sample t-Test Results for Abnormal Return

Paired Samples Test										
		Paired Differences					t	df	Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference					
					Lower	Upper				
Pair 1	AAR_4Feb_Before - AAR_4Feb_After	-.00667	.01704	.00984	-.04899	.03566	-.678	2	.568	
Pair 2	AAR_2Apr_Before - AAR_2Apr_After	-.01687	.05378	.03105	-.11674	.15048	-.543	2	.641	

Source: Processed secondary data, 2025

Based on the results of the paired-sample t-test, this study compares the Average Abnormal Return (AAR) before and after two U.S. import tariff policy events, namely the implementation of the 10% import tariff on Chinese products on February 4, 2025, and the reciprocal tariff policy imposed on 57 countries, including Indonesia, on April 2, 2025. The purpose of this test is to determine whether there are statistically significant differences in market conditions before and after each event.

For the February 4, 2025 event (Pair 1), the mean difference in AAR was -0.00667 , with a standard deviation of 0.01704 . The calculated t-value was -0.678 , with a two-tailed significance value (p-value) of 0.568 , which is greater than the 0.05 significance level. These results indicate that there is no statistically significant difference in abnormal returns before and after the implementation of the 10% U.S. import tariff on Chinese products. In other words, the market did not exhibit a sufficiently strong change in reaction following the policy announcement.

Similarly, for the April 2, 2025 event (Pair 2), the mean difference in AAR was 0.01687 , with a standard deviation of 0.05378 . The calculated t-value was 0.543 , while the two-tailed significance value was 0.641 , which also exceeds the 0.05 threshold. These findings suggest that there is no statistically significant difference in abnormal returns before and after the implementation of the U.S. reciprocal tariff policy on 57 countries, including Indonesia. Therefore, statistically, the policy did not produce a meaningful change in market reactions as reflected by stock abnormal returns.

Overall, the results indicate that neither of the two U.S. import tariff events generated a statistically significant difference in abnormal returns between the pre-event and post-event periods. This suggests that the Indonesian stock market did not respond differently in a consistent manner before and after the implementation of these tariff policies.

In general, these findings imply that the U.S. import tariff increases introduced in 2025 did not significantly affect the abnormal returns of stocks listed in the LQ45 Index. The results are consistent with previous studies conducted by Ansorimal et al. (2022), Qisthi et al. (2025), and Siska and Arigawati (2020), which similarly reported no significant differences in abnormal returns surrounding major economic or political events.

Hypothesis 3 examines whether there is a significant difference in Trading Volume Activity (TVA) before and after the implementation of the U.S. import tariff policies, namely the 10% import tariff on Chinese products implemented on February 4, 2025, and the reciprocal tariff policy imposed on 57 countries, including Indonesia, on April 2, 2025. Based on the results of the normality test, both the Abnormal Return and Trading Volume Activity data were found to be normally distributed. Therefore, the hypothesis was tested using the paired-sample t-test to compare the pre-event and post-event trading volume activity for each event. The results of the analysis are presented in Table 4.

Table 4. Paired-Sample t-Test Results for Trading Volume Activity

Paired Samples Test										
		Paired Differences					t	df	Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference					
					Lower	Upper				
Pair 1	ATVA_4Feb_Before - ATVA_4Feb_After	-.07610	.11226	.06481	-.35496	.20276	-1.174	2	.361	
Pair 2	ATVA_2Apr_Before - ATVA_2Apr_After	-.04367	.03907	.02255	-.14071	.05338	-1.936	2	.192	

Source: Processed secondary data, 2025

Based on the results of the paired-sample t-test in Table 4, this study tested Hypothesis 3 (H3) to determine whether there were significant differences in Trading Volume Activity (TVA) before and after two U.S. import tariff events implemented in 2025. The events analyzed were the implementation of the 10% U.S. import tariff on Chinese products on February 4, 2025 (H3a), and the implementation of U.S. reciprocal tariffs on 57 countries, including Indonesia, on April 2, 2025 (H3b).

In this analysis, Average Trading Volume Activity (ATVA) was used to measure the average level of stock trading activity during the pre-event and post-event periods. ATVA_4FEB_Before represents the average trading volume before the implementation of the 10% tariff on Chinese products, while ATVA_4FEB_After represents the average trading volume after the policy took effect. The same measurement approach was applied to the April 2, 2025 event.

The results for Pair 1 (ATVA_4FEB_Before – ATVA_4FEB_After) indicate a mean difference of -0.07610 , with a significance value (p-value) of 0.361 . Since the p-value exceeds the 0.05 significance level, the difference is not statistically significant. This finding suggests that the implementation of the 10% U.S. tariff on Chinese products did not lead to a significant change in trading volume activity in the Indonesian stock market.

Similarly, the results for Pair 2 (ATVA_2APR_Before – ATVA_2APR_After) show a mean difference of -0.04367 , with a p-value of 0.192 . As this value is also greater than 0.05 , there is no statistically significant difference in trading volume activity before and after the implementation of the U.S. reciprocal tariff policy affecting 57 countries, including Indonesia.

Overall, the findings indicate that neither of the two U.S. import tariff events caused a significant change in the trading volume activity of LQ45 stocks. These results suggest that, although the tariff announcements represented important international economic events, they did not trigger substantial changes in investors' trading behavior as reflected in trading volume. The findings are consistent with previous studies by Agrivina and Komara (2022), Andari et al. (2020), Ansorimal et al. (2022), Sahputra et al. (2022), Siska and Arigawati (2020), Widyarti et al. (2021), and Willyan Lasano et al. (2021), all of which similarly reported no significant differences in Trading Volume Activity surrounding major economic events.

Discussion

The development of international trade policies, particularly the U.S. import tariff policies implemented in 2025, attracted considerable global attention due to their potential impact not only on international trade relations but also on financial markets, including the Indonesian capital market. This study focuses on two major events: the implementation of the 10% U.S. import tariff on Chinese products on February 4, 2025, and the implementation of reciprocal tariffs on 57 countries, including Indonesia, on April 2, 2025. These policy changes raised questions regarding how the Indonesian stock market, particularly companies included in the LQ45 Index, responded to such international economic events. To address this issue, the study employed an event study approach by examining Abnormal Return (AR) and Trading Volume Activity (TVA).

Prior to hypothesis testing, a normality test was conducted to ensure that the Abnormal Return and Trading Volume Activity data satisfied the assumptions required for parametric analysis. The results confirmed that all variables were normally distributed, allowing the use of One-Sample t-tests and Paired-Sample t-tests. Meeting this assumption ensures that the statistical results accurately reflect market reactions rather than being influenced by violations of data distribution assumptions.

The first hypothesis (H1) examined whether abnormal returns occurred around the announcement of the U.S. import tariff policies. The One-Sample t-test results revealed significant abnormal returns surrounding both events, although the intensity and timing of the market reaction differed. Following the implementation of the 10% tariff on Chinese products on February 4, 2025, significant abnormal returns were observed on $t-3$, $t-1$, $t+2$, and $t+3$, suggesting that investors had begun responding even before the official implementation date and continued adjusting their expectations in the days immediately afterward.

A stronger market response was observed for the April 2, 2025 tariff policy, which imposed reciprocal tariffs on 57 countries, including Indonesia. Significant abnormal returns occurred on $t-3$, $t-2$, $t+1$, and $t+3$. The broader scope of this policy likely increased uncertainty among investors because it directly affected Indonesia and numerous other trading partners. Consequently, the Indonesian capital market exhibited a more pronounced reaction, indicating that larger-scale international trade policies tend to generate stronger market responses.

While H1 investigated the existence of abnormal returns on individual trading days, the second hypothesis (H2) examined whether there were significant differences in the average abnormal returns before and after each event. The results of the Paired-Sample t-test indicated that all significance values exceeded the 0.05 threshold, suggesting that no statistically significant differences existed between the pre-event and post-event periods. Although significant abnormal returns appeared on several individual trading days, these short-term reactions did not translate into sustained changes in average market performance. These findings suggest that investors quickly incorporated the new information into stock prices, after which market conditions rapidly returned to equilibrium.

The findings support the semi-strong form of the Efficient Market Hypothesis (EMH), which argues that publicly available information is rapidly reflected in security prices. Under this framework, investors cannot consistently earn abnormal profits from publicly available information because the market adjusts efficiently once new information becomes available. The temporary abnormal returns observed in this study therefore represent short-lived market adjustments rather than persistent market inefficiencies.

The third hypothesis (H3) investigated whether the U.S. tariff policies affected Trading Volume Activity (TVA). The results of the Paired-Sample t-test revealed no statistically significant differences in trading volume before and after either event. Specifically, the significance values were 0.361 for the February 4, 2025 event and 0.192 for the April 2, 2025 event, both exceeding the 0.05 significance level. These findings indicate that although stock prices experienced temporary adjustments, investors did not substantially alter their trading intensity. In other words, market participants responded primarily through price movements rather than by significantly increasing or decreasing their trading activity.

This evidence also aligns with Signaling Theory, which suggests that public announcements provide signals that influence investors' expectations and investment decisions. The U.S. tariff announcements represented economically relevant information and generated short-term price reactions. However, the absence of significant changes in trading volume indicates that these signals were not sufficiently strong to induce widespread changes in investors' trading behavior. Investors appeared to interpret the tariff policies as temporary external shocks rather than information requiring substantial portfolio reallocation.

Overall, the findings demonstrate that the Indonesian capital market responded to the U.S. tariff policies through short-term price adjustments, while trading activity remained relatively stable. The presence of significant

abnormal returns on specific trading days indicates that investors reacted promptly to new information. However, the absence of significant differences in average abnormal returns and trading volume before and after the events suggests that these reactions were temporary and quickly absorbed by the market. Therefore, the evidence indicates that the impact of the 2025 U.S. import tariff policies on LQ45 stocks was limited to short-term market adjustments, supporting the notion that the Indonesian capital market processes public information efficiently while maintaining relatively stable investor trading behavior.

CONCLUSION

This study aims to examine the reaction of the Indonesian capital market to the import tariff policies implemented by the United States in 2025. The events analyzed include the implementation of a 10% U.S. import tariff on Chinese goods on February 4, 2025, and the imposition of reciprocal import tariffs on 57 countries, including Indonesia, on April 2, 2025. These events were analyzed by examining Abnormal Return (AR) and Trading Volume Activity (TVA) of companies listed on the Indonesia Stock Exchange (IDX), particularly those included in the LQ45 Index.

The findings indicate that each event generated significant Abnormal Returns during several days surrounding the event window ($t-3$ to $t+3$), suggesting that the market responded to the announcement of these tariff policies. Among the analyzed events, the implementation of tariffs on 57 countries on April 2, 2025, produced the strongest market reaction, as reflected by significant abnormal returns on a greater number of trading days compared with the other event.

However, further analysis using the Paired Sample t-test to compare the average abnormal returns before and after each event revealed no statistically significant differences. This finding suggests that, although the market reacted to the announcements, the reaction was temporary and confined to the short term, with no lasting impact on average stock returns.

A similar result was obtained for Trading Volume Activity (TVA). All statistical tests produced significance values greater than 0.05, indicating that there was no significant difference in average trading volume before and after the events. Therefore, although stock prices responded to the tariff announcements, trading activity did not experience substantial changes. Overall, the Indonesian capital market appears to be responsive to global economic events, but the effects are short-lived and do not fundamentally alter overall trading patterns.

This study has several limitations. First, the analysis focuses on only two U.S. import tariff policy events, which may not fully capture the broader dynamics of international trade policies during the study period. Second, the event window employed in this study is relatively short, covering only seven trading days ($t-3$ to $t+3$). While this period is appropriate for capturing short-term market reactions, it may not adequately reflect medium- or long-term market effects. Finally, the study considers only two market reaction indicators, namely Abnormal Return and Trading Volume Activity, without incorporating other external factors that may also influence stock market performance.

Based on these findings, several recommendations are proposed. For future researchers, it is recommended to incorporate additional macroeconomic variables, such as exchange rates, inflation, interest rates, or other international trade indicators, to provide a more comprehensive understanding of market reactions. Future studies should also consider employing a longer event window, such as 10 trading days before and after the event, to capture medium-term market responses more effectively. Furthermore, similar analyses could be conducted using other stock indices to compare market sensitivity across different groups of listed companies.

For investors, investment decisions should not rely solely on short-term price movements triggered by global policy announcements. Since the findings indicate that the impact of such policies tends to be temporary, investors are encouraged to combine short-term market analysis with fundamental analysis and broader economic assessments to make more informed investment decisions and manage investment risks effectively.

For publicly listed companies, continuous monitoring of international trade policies is essential. Although these policies may not significantly affect trading volume, they can influence investor perceptions regarding corporate performance and future prospects. Therefore, companies are encouraged to maintain transparent disclosure practices, strengthen their business strategies, and diversify their markets to reduce exposure to external economic and trade-related risks.

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