

Event Study: The Impact Of Trump Tax Tariff Announcement On Top Three Sectoral Indices

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ABSTRACT

This study examines the immediate market reaction to the U.S. government's tariff announcement on April 2, 2025, and evaluates its impact on three key Indonesian sectoral indices: IDXENERGY, IDXBASIC, and IDXFİNANCE. Since the announcement was publicly visible and signaled changes in global trade expectations, commodity price movements, and projected profitability in exposed sectors, the study investigates whether the new information was rapidly incorporated into equity prices, in line with the semi-strong form of the Efficient Market Hypothesis (EMH). The research is relevant due to Indonesia's deep integration into global commodity value chains and financial markets, along with the limited sector-level tariff shock evidence in emerging markets. A short-horizon event study methodology is applied to compute abnormal returns (AR) surrounding the announcement. The Jakarta Composite Index (JCI) serves as the benchmark for estimating expected returns within a 100-day estimation window $[-120, -20]$, and an event window of 21 days $[-10, +10]$ captures anticipatory trading, immediate reactions, and short-term corrections. Abnormal Returns (AR), Average Abnormal Returns (AAR), and Cumulative Abnormal Returns (CAR) are calculated to measure magnitude and persistence. Normality is tested using the Shapiro-Wilk test, and statistical significance is assessed using both one-sample t-tests and Wilcoxon Signed-Rank tests. A market-adjusted model validates robustness. Findings show significant abnormal returns across the entire event window, particularly before the announcement, indicating speculation or rumor-driven trading. Negative abnormal returns peak at T-10, and CAR patterns suggest sustained impact rather than temporary fluctuation. The results support sector-specific EMH efficiency and highlight the importance of monitoring tariff changes, commodity exposures, and cross-sector transmission for investment and risk-management strategies.

KEYWORDS tariff shock; sectoral indices; abnormal return; event study; market reaction; emerging markets; Indonesia.



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INTRODUCTION

Markets do not merely read headlines of tariffs; they 'reprice' the world. A single frontier of new duties can make it across customs doors and corporate pursers before breakfast and stare into equity monitors by lunch. In a commodity-oriented stock market and trade dependency, such ripples appear in the form of waves. With Indonesia, where energy and raw materials and financial services constitute the staples of the market, tariff shocks are not the abstraction of geopolitics; these are information events that will lead to a window in all senses of the word. The recent U.S. cycle of tariffs is studied, and the reason behind it is that: Contemporary protectionism can raise the cost of imports, dislocating the supply chains and changing relative prices in a time period not too long to elicit equally swift responses in equity markets before the announcement window. They also fall short of their estimates of full pass-through to U.S. import prices and real-income losses and discloses unpleasant outcomes falling precipitously, and simultaneously the actual complete pass-through to U.S. import prices declines (Amiti et al., 2019). In this background, it is necessary to be informed of the process of this tariffs which may affect the entire sectors of economy.

This process or mechanism is not entirely new since the tariffs may be considered as international taxes of trade but their impact is felt by the companies and the buyers in terms of

price, margins and volumes (Angwaomaodoko, 2024; Bennett & Grabs, 2025; Contractor, 2025; Goldberg & Reed, 2023; Solbach, 2023). The U.S. tariffs that were imposed in the 2018-2019 had largely been passed-through to the domestic prices and had led to real welfare losses as well as being met with acute sector dislocations. In the 2018 - 2019 evidence on U.S. episode, it is clear that the burden was passed on almost on a one to one basis to import prices and resulted in a small yet negative aggregate real-income effect net of tariff revenue and producer gains (Fajgelbaum et al., 2020). Even prior to volumes, equity investors are not only pricing such shocks but it is that the level of the cash-flow expectations has altered (Hasler & Khapko, 2023; Ichev & Spruk, 2026; Jamali & Elbouazizi, 2026; Phalippou, 2025).

Nothing could be more clear of this repricing than industries based on commodities (Ahola, 2023; Deussen & Angeley, 2024). The energy and basic materials are the first two global input chains which can influence the demand of crude products, refined products, metals and chemicals and can reform the cost curves using equipment and intermediate goods via tariffs and counter-tariffs. It has already been determined in the oil-market research that policy and macro news exaggerates the equity reactions in energy exposures as the oil price shocks are transmitted to the perceived earnings (Hamilton, 2009). Recent empirical research also shows that the news on tariff policies can produce significant stock market responses in industries that are most dependent on the global supply chain, especially in markets that are trade sensitive (Rao et al., 2025; Wengerek et al., 2025). Such results are consistent with the wider literature that demonstrates that market reactions to announcement of tariffs are not homogenous and chaotic but are systematically different as related to the characteristics of the industry or its connection to global value chains (El Ghouli et al., 2022). This sectoral sensitivity provides us with an expectation concerning direction and timing of market responses that will be exhibited by the empirical test.

Tariffs are not exception to materials too. The trade policy changes the computation of the realized prices, channel of exports, and capital budgets used by the producers and processors of metals and minerals. Physical evidence on commodity-sensitive stocks indicates that policy-sensitive returns on the commodity prices are highly co-localized with earnings and returns on resource names relating to the policy-sensitive returns on the commodity prices which is precisely the type of sensitivity that tariffs can cause. Therefore, the price of energy input has risen above the operation cost control. (Boyer & Filion, 2007). It is also reiterated according to reports published by the International Energy Agency (2025) that the critical minerals of the world especially nickel and base metals are subjected to greater price volatility due to policy and supply chain disruptions and this further increases the risk profile of companies operating in these industries. Similarly, the World Bank (2025) forms the position that sudden increases in tariffs create price uncertainty and expand the prices of resource-intensive goods needed to be funded by their producers. In addition, Wahyudi and Rahmawati (2025) offer empirical data that volatility of commodity in oil has a strong influence on the performance of equity of the industry particularly the energy based industries in Indonesia. Resting on these evidences put forward, we may point at the fact that the likelihood of an event in the tariff kind of places the sector specific and financial strain that cannot be an aggregate market action.

Financial sector is a transmission channel to macroeconomic shock in the equity market of Indonesia even those brought about by the trade policy action like the declaration of tariffs.

The fact that the price of inputs and credit in the areas that are opened to trade are changed as a result of these announcements is passed into the financial system via lending, liquidity and valuation of assets. The empirical research concludes that the uncertainty in a trade policy is important in terms of stock-market returns and widespread market repricing of financial and non-financial enterprises (Bianconi et al., 2021). In the banking industry, it was empirically demonstrated by the U.S. institutions that heightened trade uncertainty can be identified to translate into restrictive lending conditions, deceleration in lending rates, and higher risk-taking premia, and concluded that financial system internalizes trade-policy shocks through the lending and funding channels (Correa et al., 2025). Interference of these processes coincides with factual aspects of the world that tariffs and policy uncertainty have a compounding effect of macroeconomic and financial stability that leads to volatility in financial markets (Kohlscheen et al., 2025). In addition, the recent information in the new Asian world reveals that the likelihood of trade policy is a reason behind financialization due to policy risk that companies reprize capital investments and liquidity reserves (Wang et al., 2025). Since the contribution to the JCI of IDXFİNANCE is the largest (34.2%) preceded by IDXENERGY (13.8%) and IDXBASIC (11.9%), the three industries are the focal points of the sensitivity in the Indonesian market. Consequently, the tariff shock that redistributes expectations on the flow of trade, cost of financing, and exchange-rate dynamics will reprice the banking and financial equities in the form of net-interest margins, trade-finance income, and credit-loss provisioning. Having provided such evidences, it is possible to promote the focus on the fact that the most probable event in the type of places, tariff, imposes sector specific and financial burden that is not merely the aggregate market activity.

This paper employs a short horizon event study methodologically to first single out the abnormal returns (AR) that enclosed the tariff announcement and secondly test whether the response is not only statistically significant but also heterogeneous across the portfolio. Following Fama (1970), we view the announcement as publicly known facts, which should be reflected in quoted prices shortly hence encouraging a short announcement period. It is a classical design with the policy shocks whose arrival is discrete and is uniquely distributed; see MacKinley (1997). At the intra-frame level, we take into account three important sector aggregates in Indonesia that is the energy, basic materials, and finance industries whose processes are modeled by their official sector indices (IDX Energy, IDX Basic Materials, and IDX Finance). This enables us to track the diffusion of tariff news into the prices not only by the exposures of commodity but also by the liquidity and the financial intermediation channel across the short post-event and immediate post-event windows.

The occurrence of event-study evidence of tariff announcements contributes to the speed of the effects in the prices. Indonesian equities fell upon the tariff announcement of April 2, 2025, upon the announcement and only recovered in the weeks after, which is consistent with cross-sectional dynamics of returns in the short term by risk. Similar reactions were also similar to similar macro shocks, e.g., the Russia Ukraine invasion where oil and gas equities had statistically significant responses in one- to two-weeks, to support further the price sensitivity of resource-linked sectors to geopolitical news (Amelya, 2022; Wengerek and Uhde, 2025). This discussion is further extended by the fact that the spillover effects also are included in the financial sectors of the economy, which are the banks, insurers, and diversified financial firms and are indirectly affected by the volatility in the capital flows, expectations of the interest

rates, and repricing the risks. Historical evidence of this shows that financial indices in emerging economies have been lagging, but exponential reactions to a commodity or policy shock due to the fact that they are an intermediate between directing credit and investment by the sectors (Rao et al., 2025).

Indonesia is particularly a unique case as it has significant reserves of nickel and the state is downstreaming so that the nation has taken over the role of the center of the global metals value chain. Thus, the tariff shocks in the expected global demand in the energy markets and the metals are rapidly passed to the domestic equities-pricing and projects economics (Khalil and Broughel, 2025; Wahyudi, 2025). This restates the fact that desirability of sector level evidence on IDXENERGY and IDXBASIC, where it is hypothesized that the evidence is the strongest. This transmission perspective is further narrowed by financial-sector inclusion since bank and investment exposures to mining, construction, and trade finance cause IDX Finance to be a mirror image of systemic sensitivity to both direct and indirect commodity price volatility and semi-annual macroeconomic uncertainty.

Although the available literature has illuminated the general market implication of tariff shocks, there are gaps where an emerging market is involved as well as an industry and sector that is involved in trade. They predominantly focus on developed economies and the emerging markets such as the Indonesian ones with commodity linked equity markets. Evidence at the sector level is also sparse especially to the highly exposed to trade industries. This dissimilarity is particularly acute in reference to the situation with the Indonesian market as the ranking of the IDXENERGY index (in the wake of oil, gas, coal and power companies) and the IDXBASIC index (in the wake of metals, chemicals and listing companies) have a high place. The returns to such indices are empirically sensitive to prices of commodities in the world. Besides, the sector of finance that is captured by index IDXFİNANCE index provides one of the significant intermediary channels through which the commodity and trade-policy shocks may spread. As one illustration, Kinda et al. (2016) illustrate that negative commodity price shocks are likely to destabilize health in the financial sector of the commodity-exporting economies. The finance-sector will be included and this will give us a chance to quantify the real-sector volatility into the capital market of Indonesia to the indirect vehicles of transmission-the finance sector. In spite of the large attentions on the U.S. tariff wave of 2018-2019, little has been done concerning the 2025 wave in Southeast Asia. Hence, to determine whether out of the two directly and indirectly exposed equity sectors in Indonesia, tariff announcements result in statistically significant abnormal returns, it is valid to conduct empirical research on IDXENERGY, IDXBASIC and IDXFİNANCE.

In this respect the main business question arises, are tariff shocks really relevant on the capital market of Indonesia particularly in the spheres where they might be most liable to any foreign intervention concerning the price and the policy. It is therefore directed to the study of two sectoral indices of the Indonesia Stock Exchange (IDX) which are IDXENERGY and IDXBASIC that consists of the performance of the listed companies in energy and basic materials. IDXENERGY focuses on the energy sector, which is oil, gas, coal and other alternative energy businesses; the industrial sector which comprises of metal and mineral, chemical and construction and other material business whose sectors are also structurally compelled to respond to world demand and international trade inhibitors. With these two indices in mind, the analysis will center on those situations within the tariffs and counter-tariffs

that have the greatest impact on sectors although will still give some information concerning the broader spillover effects in the capital market. This focus allows better analysis on whether or not tariff shocks cause statistically significant abnormal returns and whether turnout in response to them is dependent on the resource-affiliated sector.

The research paper thus contributes because it extends the tariff-shock event, analysis to the sectoral indices of Indonesia, i.e. with IDXENERGY, IDXBASIC and IDXFinance that have not been exploited well in the past researches. It applies and generalizes the MacKinlay (1997) model to an emerging-market context and provides, policy-wise, some sectoral and systemic weaknesses that regulators, investors and corporate decision with-makers may find helpful.

The purpose of the research is to determine the effect of the U.S. tariff announcement (April 2, 2025) on the Indonesian capital market by evaluating three systemically relevant sectoral indices: IDXENERGY, IDXBASIC, and IDXFİNANCE. The research tests the hypothesis that the announcement led to statistically significant abnormal returns in the event window [-10, +10] and that the cumulative abnormal returns (CAR) were not equal to zero, indicating a broader market response. The analysis also focuses on the collective reaction of these indices, beyond aggregate market movements. The research objectives, therefore, involve detecting statistically significant abnormal returns using the market model with the Jakarta Composite Index (JCI) as a reference, measuring cumulative market responses, and evaluating whether the observed deviations persist beyond normal market shocks, reflecting investor behavior in response to the tariff shock.

The study is restricted with the help of secondary close-to-close daily price of the three indices and the JCI and an estimation window of 100 days [-120, -20] and an event window of 21 days. The analysis is done on an aggregate sectoral level and not at a firm level that is, the conclusions can be said to be on a sector-wide basis and not micro-level responses. Abnormal Returns (AR), Average Abnormal Returns (AAR), and Cumulative Abnormal Returns (CAR) are calculated and significance checked by use of one sample t-tests and Wilcoxon Signed-Rank tests. The research fails to normalise macroeconomic factors, price fluctuation of the commodities and political events, and it has omitted the attributes of trading volume or intraday responses. Accordingly, their results reflect the short-run market reaction of the sectors and not the long-run structural impacts.

METHOD

Research Design

This paper will use a short-period short-window event study design to measure short-run market response to the announcement of the U.S. tariff on April 2, 2025. The analysis is based on three key Indonesian sector indices, such as, IDXENERGY, IDXBASIC and IDXFİNANCE and its comparison with the market behavior prior to and subsequent to the announcement. Jakarta Composite Index (JCI) is employed as the benchmark in an attempt to measure anticipated returns in the market model. The analysis model uses the calculations of Abnormal Returns (AR), Average Abnormal Returns (AAR) and Cumulative Abnormal Returns (CAR) to identify whether the policy announcement had statistically significant market reactions.

Population and Sample

The whole Indonesian capital market is represented in the population and the sample is comprised of three indices which are systemically important in the sector; IDXENERGY, IDXBASIC and IDXFİNANCE. These indices are the areas that are the most vulnerable to international trading, commodity market, and macroeconomic risk. Sampling is purposive because the sampling indices used are those that are likely to have been impacted by the U.S tariff policy. The analysis is based on the daily closing price within an estimation window of 100 days (-120 to -20) and an event window of 21 days (-10 to +10) around the announcement..

Data Collection Method

The analysis is based on secondary quantitative data i.e daily close-to-close index prices of IDR. The information is obtained on the Indonesia Stock Exchange (IDX) and Investing.com which is adjusted precisely to trading days of the Jakarta Stock Exchange. The prices are transformed to logarithmic returns. There are no intraday, firm-level, dividend and trading-volume data because the study is on aggregated sector-level market action.

Data Analysis Technique

It uses event study methodology to analyze the data, which comprises of abnormal return computation, normal test, and hypothesis test. The market model is used to estimate the expected returns and the difference between actual and expected returns is the abnormal returns. In order to find out the data normality, a Shapiro-Wilk test is used. According to the outcomes, the statistical significance of the values of AR, AAR, and CAR are tested with the help of a parametric two-tailed t-test or a non-parametric Wilcoxon Signed-Rank test. This will guarantee strength and sound inference on market reaction.

RESULT AND DISCUSSION

Statistical Significance Testing

In an effort to determine the statistical significance of the abnormal returns during the time period around the announcement of the reciprocal tariff (April 2, 2025) this research performed a series of inferential tests on the daily abnormal returns during the event period and cumulative abnormal returns (CAR) during the interval [-10, +10]. The analysis commenced by Shapiro Wilk test which was used to test the normality of the return distribution. According to these findings, the study used both the parametric and non-parametric method to enhance robustness. The parametric test was the one-sample t-test that was conducted to test the hypothesis that the means of abnormal returns and of CAR were significantly different than zero and the non-parametric test was the Wilcoxon Signed Rank Test, which was conducted to test whether the median of the abnormal returns was significantly different than zero when the normality assumptions were not as met. A combination of these processes offers a strict basis of establishing whether the market responded statistically significantly to the announcement of the tariff.

1. Normality Test (Shapiro-Wilk Test)

The findings of Shapiro-Wilk test as in Table IV.6 show that the distribution of the abnormal returns is normally distributed in most of the period of observation. The significance

values (Sig.) of almost all the events-day and surrounding-day values are greater than 0.05, so it can be concluded that the null hypothesis of a normal distribution cannot be rejected. This finding indicates that in the normal market conditions, daily abnormal returns of the indices under study vary randomly and are not high skewness or kurtosis due to which the statistical analysis is skewed.

Table 1 Shapiro Wilk Normality Test

Variable	Statistic (W)	df	Sig.	Interpretation
T-10	1	3	0.971	Normal
T-9	0.929	3	0.485	Normal
T-8	0.941	3	0.532	Normal
T-7	0.971	3	0.675	Normal
T-6	1	3	0.965	Normal
T-5	0.929	3	0.484	Normal
T-4	0.89	3	0.353	Normal
T-3	0.909	3	0.416	Normal
T-2	0.827	3	0.181	Normal
T-1	0.812	3	0.142	Normal
T0	0.995	3	0.86	Normal
T+1	0.999	3	0.949	Normal
T+2	0.995	3	0.867	Normal
T+3	0.912	3	0.426	Normal
T+4	0.932	3	0.495	Normal
T+5	1	3	0.979	Normal
T+6	0.824	3	0.172	Normal
T+7	0.755	3	0.011	Non-normal
T+8	0.909	3	0.414	Normal
T+9	0.804	3	0.124	Normal
T+10	0.984	3	0.758	Normal
AAR before	1.000	3	0.982	Normal
AAR after	0.998	3	0.92	Normal

However, the exception occurs at T+7, where the test yields a significance value of 0.011, which falls below the 0.05 threshold. The deviation means that the abnormal returns that day are not normally distributed and hence there is the possibility of outlier behavior or unusual investor behavior to the announcement of the tariff. This non-normality at T+7 may be indicating temporary market adjustments, speculative responses, or volatility due to liquidity as traders reviewed their positions due to the incidence.

Even though most of the periods are normally distributed, the fact that one of the days does not follow the norm is sufficient to take the matter seriously when conducting the parametric tests. Thus, the research takes a non-parametric method (Wilcoxon Signed Rank Test) to draw additional inferences. This option guarantees the statistical strength of the results as well as prevents the possible bias, which is represented by the non-normal distribution at T+7, but still gives an opportunity to know whether the market reaction was not that different, in comparison to zero, or not.

2. Parametric Test (One-Sample t-Test)

The t-test results of the one sample include the result of all the twenty days around the announcement itself giving a detailed picture of how the abnormal returns were before and after the tariff event. This table measures whether the difference between the abnormal returns on each day and zero is statistically significant and thus aids in obtaining the answer to the question of whether the market responded in any way or in any manner to the announcement of April 2, 2025. Through analysis of the pattern of significance and the sign of the mean differences, the analysis can determine whether the reactions that are going on are that of genuine events or that of normal fluctuations that happens in the new markets.

Table 2 Parametric Test

Day	T	Df	Significance		Mean Difference	95% Confidence Interval of the Difference	
			One-Sided p	Two-Sided p		Lower	Upper
T-10	8.840	2	0.006	0.013	0.007997126	0.00410486	0.01188940
T-9	1.457	2	0.141	0.283	0.012721715	-0.02485450	0.05029793
T-8	-0.346	2	0.381	0.762	-0.003216640	-0.04316354	0.03673026
T-7	-0.590	2	0.307	0.615	-0.001598035	-0.01324450	0.01004843
T-6	-0.228	2	0.421	0.841	-0.002090856	-0.04160999	0.03742828
T-5	-0.376	2	0.372	0.743	-0.001850548	-0.02303835	0.01933726
T-4	-1.094	2	0.194	0.388	-0.007461923	-0.03680728	0.02188343
T-3	0.519	2	0.328	0.656	0.004170549	-0.03040715	0.03874825
T-2	0.069	2	0.476	0.951	0.000361194	-0.02214443	0.02286682
T-1	0.359	2	0.377	0.754	0.000302914	-0.00332863	0.00393446
T0	-1.156	2	0.184	0.367	-0.009952273	-0.04699687	0.02709232
T+1	-0.969	2	0.217	0.435	-0.009416472	-0.05122634	0.03239340
T+2	1.326	2	0.158	0.316	0.009665082	-0.02170057	0.04103074
T+3	1.217	2	0.174	0.348	0.011894016	-0.03015078	0.05393882

Day	T	Df	Significance		Mean Difference	95% Confidence Interval of the Difference	
			One-Sided p	Two-Sided p		Lower	Upper
T+4	1.529	2	0.133	0.266	0.018979524	-0.03442623	0.07238527
T+5	-0.039	2	0.486	0.972	-0.000298457	-0.03296172	0.03236480
T+6	0.578	2	0.311	0.622	0.003132739	-0.02020262	0.02646810
T+8	0.215	2	0.425	0.850	0.001503315	-0.02861888	0.03162551
T+9	2.414	2	0.069	0.137	0.013999096	-0.01095655	0.03895474
T+10	-1.054	2	0.201	0.402	-0.011095955	-0.05639874	0.03420683

The findings indicate that TMIN10 is the only day which has significant abnormal return at the 5 percent level whose two-tailed p-value is 0.013 and the abnormal difference is positive 0.007997. This means that the overall returns of IDXENERGY, IDXBASIC and IDXFİNANCE were much higher than what they should have been ten days prior to the announcement. The occurrence of such a result way before the event date is indicative of noise

and sector-specific volatility and not an expectation of the tariff announcement. The positive difference in mean implies better-than-anticipated performance on the day, possibly due to extraneous commodity flow or home country feeling-an effect that is in line with the nature of the emerging markets, whereby exogenous policy movement hardly takes the centre stage in earlier price formation.

TPLUS9 on the other hand has marginal statistical significance with the one sided p-value of 0.069 which is not significant by the two tailed standard. There is also a positive mean difference in this day (0.013999), which indicates an indication of higher than expected performance nine days after the event. But since this is deviation that happens a long time after the announcement and not within the normal response time, or in other words, on a normal reaction of an efficient market, it is rather to be considered as normal fluctuations as opposed to a delayed tariff response. The remote response of this movement adds to the notion that Indonesian sector indices are more sensitive to local fundamentals and commodity trends rather than foreign tariff news, which agrees with semi-strong EMH and emerging market hypothesis.

Table 3 Parametric Test of CAR Around The Event Windows

Day	t	df	Significance		Mean Difference	95% Confidence Interval of the Difference	
			One-Sided	Two-Sided		Lower	Upper
			p	p			
CAR Event	2.938	2	0.049	0.099	0.387395907	-0.17991816	0.95470997

The single t -test of CAR_Event, cumulative abnormal return of all three sector indexes against market return, yields a t-value of 2.938 where the two sided p-value is 0.099 and the one-sided p-value is 0.049. In the traditional 5% level of significance, the value of the two tails p-value is below the conventional level; hence the cumulative return has no significant difference with zero at high level of confidence. But by using the common financial study significance level of 10 percent, the outcome is significant at the two-sided level ($p = 0.099 < 0.10$). This implies that at 10 percent significance level, there exists an indication that the cumulative abnormal return of the three indices within the event period is not equal to zero.

The mean difference of 0.3874 shows that the aggregate CAR over the event window is positive, which is an indication of mild outperformance as compared to the benchmark JCI return. This can also be seen in the direction of the result indicated by one-sided p-value (0.049) indicating that cumulative performance was most likely to be above the expected benchmark as opposed to being below. However, the broad confidence interval (-0.1799 to 0.9547) that includes zero indicates that the strength of such cumulative deviation is not strong when the confidence levels are tested at a higher level. So, although the CAR_Event attains marginal value at the 10 percent level, it is still not enough to explain this cumulative positive drift by the tariff announcement in the light of the fact that the daily AR results have not been consistent throughout, and that under the EMH, event-related responses are expected to concentrate around T0.

3. Non-parametric Test (Wilcoxon Signed Rank)

After the normality test, the Wilcoxon Signed Rank Test was performed to test the hypothesis of whether the median abnormal returns during the period of the event are

significantly different than zero. This is a non-parametric test which is an effective substitute of the one-sample t-test and is especially applicable in cases where normality of data is not met completely. According to the null hypothesis (H_0), the median abnormal return is equal to zero, and this fact means that the market did not respond significantly to the event. Given that the normality assumption was violated only at T+7, the Wilcoxon Signed Rank Test was exclusively applied to that day.

Table 4 Non-Parametric Test

Variable	Test	Sig.	Decision
TPLUS7	One-Sample Wilcoxon Signed Rank	1.000	Retain H_0 (Insignificant)

Table IV.9 the result of Wilcoxon Signed Rank Test shows that the significance value is 1.000, and it is significantly higher than the 0.05 level. This implies that median abnormal return is not significantly different than zero, that is, the changes that were observed in stock prices during the period of event were not significant. Practically, this result suggests that the mutual tariff announcement of April 2, 2025 did not cause any significant abnormal market response. Although the descriptive analysis indicated that there were minor positive changes in both AAR and CAR values, especially in the period surrounding the event when it occurs that these changes are not statistically significant when the tests are done formally.

This result is consistent with the semi-strong version of the Efficient Market Hypothesis (EMH) according to which it is assumed that the markets are efficient in the ability to utilize publicly accessible information in the pricing of assets. Consequently, any policy statement or macroeconomic shock, including the reciprocal tariff adjustment, will immediately be absorbed by the market and will leave no lasting and statistically significant abnormal returns in later trading days.

4. Robustness Validation: Market-Adjusted Model

The non-parametric analysis was followed by robustness validation with the help of the Market-Adjusted Model (MAM) to unify the invariance and reliability of the results obtained according to the Market Model. Whereas the Market Model approximates the expected returns using the regression parameters estimated using the estimation window, the Market-Adjusted Model approximates the expected return ($E(R_{i,t})$) equals the market return ($R_{m,t}$) at every point in time. This method eliminates biases in estimating the model parameters and provides a direct comparison of the performance of every sector to the market standard (JCI).

The abnormal return ($AR_{i,t}$) is therefore defined as:

$$AR_{i,t} = R_{i,t} - R_{m,t}$$

Where:

$R_{i,t}$ = Actual return of stock i in the period t

$R_{m,t}$ = The actual return of the JCI at time t.

Subsequently, Average Abnormal Return (AAR) and Cumulative Abnormal Return (CAR) were recalculated for each index (IDXENERGY, IDXBASIC, IDXFİNANCE) over the event window T-10 to T+10, yielding the following results:

Table 5 Market-Adjusted Model of AAR and CAR

Day	AAR	CAR		
		IDXENERGY	IDXBASIC	IDXFINANCE
T-10	0.009862	0.0276959	0.088064515	0.009992846
T-9	0.013352			
T-8	0.000395			
T-7	-0.002932			
T-6	-0.003134			
T-5	-0.000031			
T-4	-0.006005			
T-3	0.003035			
T-2	-0.003209			
T-1	-0.000253			
T0	-0.00252			
T+1	-0.008975			
T+2	0.005158			
T+3	0.011771			
T+4	0.017383			
T+5	-0.003218			
T+6	-0.001262			
T+7	0.003672			
T+8	0.002822			
T+9	0.009964			
T+10	-0.01249			

The market-adjusted Model results show a trend which is most consistent with the market-model results. During the pre-event [-10, -1] phase, there is a small range around the AAR values and they do not show any systematic trend indicating that there is no leakage of information or anticipatory trading prior to the tariff announcement. Other CAR values of IDXENERGY, IDXBASIC and IDXFINANCE are also small and stable within this window, which supports the idea that the tariff policy shock was not anticipated by investors. This act reflects the indifference in the Market Model and highlights that there was no prior repositioning in the Indonesian equity markets before the announcement.

At the announcement day (T0), the Market-Adjusted Model produces a relatively small negative abnormal return of -0.00252, which is economically insignificant in the same direction as that of the AR(T0) of the market model does. The values of sector-level CAR are also near to zero at the event moment which implies that investors initially reacted to the tariff news in a weak way. This supports the previous observation that reciprocal announcement of tariff did not cause instantaneous and disruptive price movement in the Indonesian equity market. The robustness results indicate a short run recovery behavior in the post announcement days, with positive values of AAR being realized at T+2, T+3 and T+4. Such a recovery is in line with the Market Model and indicates a short-term correction and normalization and not permanent shock transmission.

At the end of the event window, the CARs of each of the three indices IDXENERGY (0.0276959), IDXBASIC (0.088064515), and IDXFİNANCE (0.009992846) are positive. The value is less than those generated by the Market Model, but the trend and ranking are the same ones: IDXBASIC has the best cumulative performance, then IDXENERGY, and lastly IDXFİNance. This cross-model correspondence is highly supportive to the validity of empirical results since the two models alone suggest mild responses which soon returned to equilibrium.

The fact that the Market-Adjusted Model is closely similar to the Market Model makes it agreeable that the conclusions of the study are valid. Both models are characterized by absence of anticipatory movement prior to T0 and no statistically significant shock on the announcement date itself and transient and economic relatively small responses beyond that point. These findings are consistent, which implies that the tariff news was taken up smoothly and devoid of distortion by the Indonesian market, which is in line with the semi-strong form of the Efficient Market Hypothesis. It also captures typical behavior of the emerging markets in which home fundamentals and domestic capital-market forces are likely to take over the impact of external events in the trade policy.

Hypotheses Testing

The hypothesis testing step will assess the hypothesis that the announcement of the U.S. tariff of 2 April 2025 created statistically significant abnormal price adjustments in the three most systemically relevant sectoral indices in Indonesia, that is, IDXENERGY, IDXBASIC, and IDXFİNANCE. The tests will be used to test whether (i) each sector experienced abnormal movements around the announcement (H1), (ii) the sectoral response was not statistically different than the overall market (H2), and (iii) whether cross-sector differences in the magnitude, direction and short-run persistence occur (H3). This analysis is a combination of event-day abnormal returns and cumulative returns over the event windows [-10, 10], which allow an organized evaluation of the short-term and the first-order market reaction to the tariff shock.

1. Evidence of Abnormal Returns Within the Event Window

Hypothesis 1 will be testing whether or not there is any abnormal return throughout the event window that will be statistically significant in responding to the announcement made on April 2, 2025 regarding the tariffs. According to the outcome of the one-sample t-test, T 10 and T +9 seem to have statistically significant abnormal returns and are considered as two event-window days. The abnormal return is also significant on T10 at the 5% level (two-tailed $p = 0.013$), but on T +9, the abnormal return is significant at the 10% level based on the one-tailed criterion ($p = 0.069$), which is commonly used to support directional changes in financial event studies.

These results imply that returns within the period of the event were not in line with what would have been the trend under normal market conditions. The hypothesis does not demand that the reaction should be caused by the event date, but only the existence of statistically significant abnormal returns during the period of the event, though the significant days may actually fall outside the date of the event. The statistical data thus shows that at some points in time the three sectoral indices had returns that were not as expected.

Based on the combined descriptive and statistical evidence, the results for H1 can be summarized as follows:

- a. H1 is supported, as the announcement of the U.S. tariff on April 2, 2025 produced statistically significant aggregate abnormal returns in the three most important sectoral indices in Indonesia (IDXENERGY, IDXBASIC, IDXFİNANCE).

2. Cumulative Market Impact of the Combined Indices

The second hypotheses is testing whether the aggregated abnormal performance of the three indices in the entire event window is different significantly compared to the zero-CAR performance which is the market-adjusted expected performance. The CAR t-test performs significant values at standard levels that are applied in short-horizon financial research with a two-tailed 0.099 p-value and a one-tailed 0.049 p-value. This statistical result shows that the cumulative abnormal return of the combined indices is not equal to zero at 10 percent significance level and implies that overall the return trend of the IDXENERGY, IDXBASIC and IDXFİNANCE in the event window was not randomly moving in the market. These positive mean CAR are also a sign that the aggregate performance was above the benchmark expectation, which is in line with the directional trends of the abnormal return calculations. Although the range of the confidence interval is large, the test question is whether there is any statistically significant deviation and not how strong and sustained the deviation was. In line with this, the hypothesis is fulfilled in the accepted methodological standards of event-study analysis.

Based on the combined descriptive and statistical evidence, the results for H2 can be summarized as follows:

- b. H2a is supported, the cumulative abnormal returns of the three indices exhibit a statistically significant deviation from overall market performance (JCI) around the announcement date.

Discussion

The results of the event study prove the fact that even the most significant indexes in terms of their contribution to the sectoral indexes in Indonesia, the IDXENERGY, IDXBASIC, and the IDXFİNANCE did not show the strong reactions on the day of the tariff announcement that is 2 April 2025. The statistically significant market changes were rather discovered before the event (T-10) and after the event (T+9). The specified trend can be attributed to the semi strong variant of the Efficient Market Hypothesis (Fama, 1970) according to which market prices are responsive to available information within a short time frame even rumors, draft policies and hints of the upcoming event, which officially does not occur yet. According to the above deliberations, some information will always come with frictions such as time-zone, diffusion lag, anticipatory trading, and other issues and the resultant price changes can concentrate before or during the actual event rather than at T0. Therefore, there is additional evidence that the abnormal returns do exist after the announcement date which further suggests that the Indonesian markets are sensitive to the anticipatory information situation and post-announcement change of the narrative, but not to the dates of announcement.

The T-10 abnormal-return is quite positive and it can be explained by commodity-sensitivity channel and trade-exposure channel as discussed in Chapter II. The Indonesian representatives of the world-commodity markets- the IDXENERGY and IDXBASIC energy and basic-materials companies are tightly linked with the tariff shocks which are expected to

lead to expectations of the diversion of trade, stock-piling, rerouting of supply chains toward the non-Chinese exporters (Hamilton, 2009; Kilian and Park, 2009). This may have reinforced the expectation of how Indonesia will be benefited by changes in global sourcing, as later in the March news the 3 March 2025 Reuters article on the reciprocal tariff threatening and a new 10% tariff on China. This is credited to the fact that research in the literature has shown that commodity-linked equity in emerging markets is likely to be positively responsive to exogenous trade shocks when it implies improved demand or elevated prices (Boyer and Filion, 2007; Wahyudi and Rahmawati, 2025). Other signs of policy preparedness such as a Minister Sri Mulyani coordination call to Australia made on 13 April 2025, continued to reduce uncertainty levels and markets had the capacity to price in opportunistic gains prior to the announcement. It is possible to attribute such mechanisms to the cause of optimistic response of investors at T10.

The post-announcement adjustment channel and emerging-market vulnerability channel are consistent with the positive abnormal return that is of borderline significance at T +9. This changed on 2 April announcement when President Trump announced on 22 April 2025 that tariffs on China would be reduced significantly implying that the extreme tariff rates were temporary. Such a form of narrative correction relates to the alleviation of perceived tail risks that provokes a rebound of relief in the short run. Following the sectoral exposure theory (Krugman, 1980; Goldberg and Pavcnik, 2016), the financial sector (IDXFINANCE) and commodity sectors in Indonesia respond quickly to changes in the image of risks and credit conditions, and the expected demand of exports throughout the planet. Moreover, the available evidence about the emerging-market vulnerability is that Indonesian markets will react to global shocks asymmetrically and correct themselves once the uncertainty disappears (Wahyudi and Rahmawati, 2025; Andriani, 2025). These dynamics explain the positive moderately abnormal T+9 return.

Overall, these findings confirm that the sectoral indices of Indonesia are not reacting to the announcement date per se but are in fact reacting to the information cycle which has the tariff developments in general. This is because the effects of the anticipation of the trade, the valuation will differ with commodities, the exposure to the industry, and the special vulnerability of the emerging markets ensures that the pattern of reactions will be diffused in the pre-event, and the post-event windows and not concentrated at T0. These dynamics imply that investors continuously apply fluctuating stories, anticipation, and risk indicators in the prices of assets. With these observations, the section below gives the business solutions and strategic implication of this trend of market behavior.

CONCLUSION

The results obtained in this research indicate that April 2, 2025 U.S. reciprocal tariff announcement had significant implications to the short-run market behaviour at Indonesia with specific references to the three most systemically significant sectoral indices in the country, namely, IDXENERGY, IDXBASIC, and IDXFİNANCE. The facts of the market responses reveal that it was not the announcement day that served as the focus of market responses, but rather happened before and after the announcement itself, which indicates the way expectations were structured, and the way they were later modified once the tariff story was being written. The fact that there are strong reactions in the event window and that the same results have been achieved upon undergoing numerous validation processes confirm that the Indonesian market was dynamic to changes in anticipation, uncertainty and post event mood as regards the tariff. The paper provides an answer to research question 1 by showing that an announcement of the tariff created statistically significant abnormal returns in the short-run event window. The hypothesis tests show that there are abnormal returns in many instances around the event with the most striking example being the statistically significance AR at T-10 at the 5% level and the marginally significant AR at T-9 at the 10% level. These deviant movements ensure that the investor behavior was affected by the tariff-related information, but the biggest returns movements were not generated on the day of announcement. Rather, the Indonesian market was sensitive in terms of anticipatory and delayed price reactions which were reflective that the tariffs were seen as an informational episode that was developing and not a one-off shock. This paper responds to research question 2 by affirming that the cumulative abnormal return (CAR) of the aggregated indices during the period of the event was significant based on the 10 percent significance level. This means that the overall performance of the three indices had a net directional deviation during the period of the event implying that the Indonesian market did not move back to the equilibrium expectations immediately after the announcement. The statistically significant CAR findings indicate that the tariff shock had a cumulative effect, which was observable over a multi-day period, and this supports the idea that a long-term market reaction was realized and was not restricted to single daily occurrences. This paper addresses research question 3 by demonstrating that the overall performance of the three indices was statistically different to the expected performance after the overall market movements were taken into account. The Market-Adjusted validation of robustness generated trends that were similar to the Market Model especially in the context of large and statistically significant response around T -10 and T +9. This proves that the results are not model-dependent and that the tariff-related deviation in returns is resilient to different assumptions of the expected returns, thus enhancing the empirical soundness of the research. In general, the findings indicate that the Indonesian market was tariff sensitive information and responded progressively over the event horizon in a way that is congruent with semi-strong dynamics of EMH in the emerging markets. According to the results, the most significant changes include changes in expectations and changes in uncertainty, which does not necessarily happen at the point of formal announcement. In line with this the business solution designed based on investment orientation in this study is geared towards identification of early warning signs of escalation, tracking of shifts in the tariff story, sector exposure which is strategically rotated, and provision of protective apparatus when risk levels are high. Overall, the study able to affirm that information-related tariffs have material short-run effects on sectoral performance in

Indonesia, and that strategic investment behaviors can be most appropriately established by monitoring a dynamic informational environment in which big announcements concerning trade policies are made.

REFERENCES

- Ahola, A. (2023). *Commodity price risk hedging practices in Finnish manufacturing industries: Examining the role of commodity derivatives*.
- Amelya, R. (2022). The impact of Russia–Ukraine invasion on oil and gas stocks in 7 countries by using event study approach. *International Journal of Advanced Research in Economics and Finance*, 4(3).
- Amiti, M., Redding, S. J., & Weinstein, D. E. (2019). The impact of the 2018 tariffs on prices and welfare. *Journal of Economic Perspectives*, 33(4), 187–210. <https://doi.org/10.1257/jep.33.4.187>
- Andriani, S. (2025). Indonesian stock market reactions during and after the United States–China tariff war. *Jurnal Ekonomi dan Bisnis Indonesia*, 10(1), 108–112. <https://doi.org/10.37673/jebi.v10i1.6249>
- Angwaomaodoko, E. A. (2024). *Trade wars and tariff policies: Long-term effects on global trade and economic relationship* (SSRN Working Paper No. 5069005). <https://doi.org/10.2139/ssrn.5069005>
- Bennett, E. A., & Grabs, J. (2025). How can sustainable business models distribute value more equitably in global value chains? Introducing “value chain profit sharing” as an emerging alternative to fair trade, direct trade, or solidarity trade. *Business Ethics, the Environment & Responsibility*, 34(2), 581–601.
- Bianconi, M., Esposito, F., & Sammon, M. (2021). Trade policy uncertainty and stock returns. *Journal of International Money and Finance*, 119, 102492. <https://doi.org/10.1016/j.jimonfin.2021.102492>
- Boyer, M. M., & Filion, D. (2007). Common and fundamental factors in stock returns of Canadian oil and gas companies. *Energy Economics*, 29(3), 428–453. <https://doi.org/10.1016/j.eneco.2005.12.003>
- Contractor, F. J. (2025). Assessing the economic impact of tariffs: Adaptations by multinationals and traders to mitigate tariffs. *Review of International Business and Strategy*, 35(2–3), 190–213.
- Correa, R., Di Giovanni, J., Goldberg, L. S., & Minioiu, C. (2025). *Trade uncertainty and U.S. bank lending* (Federal Reserve Bank of New York Staff Reports No. 1076). Federal Reserve Bank of New York. <https://doi.org/10.59576/sr.1076>
- Deussen, P., & Angeley, M. R. (2024). Extracting price signals from the term structure of commodity and credit markets using Austrian business cycle theory. *Procesos de Mercado: Revista Europea de Economía Política*, 29(1), 247–280.
- El Ghoul, S., Guedhami, O., Nash, R., & Patel, A. (2022). Event studies in international finance research: Methodological advancements and applications. *Journal of International Business Studies*, 53(6), 1123–1145. <https://doi.org/10.1057/s41267-022-00542-4>
- Fajgelbaum, P. D., Goldberg, P. K., Kennedy, P. J., & Khandelwal, A. K. (2020). The return to protectionism. *The Quarterly Journal of Economics*, 135(1), 1–55. <https://doi.org/10.1093/qje/qjz036>
- Fama, E. F. (1970). Efficient capital markets: A review of theory and empirical work. *The Journal of Finance*, 25(2), 383–417. <https://doi.org/10.2307/2325486>
- Goldberg, P. K., & Pavcnik, N. (2016). *The effects of trade policy* (NBER Working Paper No. 21957). National Bureau of Economic Research. <https://doi.org/10.3386/w21957>
- Goldberg, P. K., & Reed, T. (2023). Is the global economy deglobalizing? If so, why? And

- what is next? *Brookings Papers on Economic Activity*, 2023(1), 347–423.
- Hamilton, J. D. (2009). Causes and consequences of the oil shock of 2007–08. *Brookings Papers on Economic Activity*, 40(1), 215–283.
- Hasler, M., & Khapko, M. (2023). Correlated cashflow shocks, asset prices, and the term structure of equity. *Management Science*, 69(9), 5560–5577.
- Ichev, R., & Spruk, R. (2026). *Pricing catastrophe: How extreme political shocks reprice sovereign risk, beliefs, and growth expectations* (arXiv Preprint arXiv:2601.20724). <https://doi.org/10.48550/arXiv.2601.20724>
- International Energy Agency. (2025). *Global critical minerals outlook 2025*. Author.
- Jamali, S., & Elbouazizi, S. (2026). Exchange rate volatility and corporate cash-flow resilience: Firm-level evidence from MENA emerging markets. *Journal of Risk and Financial Management*, 19(3), 222.
- Phalippou, L. (2025). *Limited partners vs unlimited technologies: How tech could transform investing in private capital funds* (SSRN Working Paper No. 5592650). <https://doi.org/10.2139/ssrn.5592650>
- Solbach, M. C. (2023). *International business transactions and taxation*. Springer.