



Fueling the Fire: How Israel Iran War Impacted Global Oil Prices

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Abstract. The 40-year hostility between Israel and Iran took shape of a war once again in the form of Israel Iran conflict which broke out on 13th June 2025 and lasted for twelve days. Crude oil, essential energy input in several countries, is also affected by this battle. The present case study is an attempt to examine and analyse how geopolitical conflict influences crude oil prices with specific reference to Israel-Iran war on oil markets. Event study methodology was applied to get insights on the case. The study also illuminates the impact of war on global sustainability. There are very few studies focused on war and Brent crude index. In this context, an attempt has been made to study oil prices in the given scenario. The event date is 13th June 2025. The study has taken 20 days before the event and 20 days after the event. The Brent crude from NYMEX was used. The AAR (Average Abnormal Returns) and CAAR (Cumulative Average Abnormal Returns) were calculated. On the CAAR paired samples t-test was performed. The p value that we obtained from the paired samples t-test was less than the level of significance of 0.05. Therefore, we interpret that the Israel Iran war has impacted the international crude oil prices. The policymakers should increase the crude oil reserves in order to tackle such a probable crisis in future.

Keywords: Crude oil prices, Israel Iran war, geopolitical conflicts, global sustainability.

1 Introduction

In June 2025, tensions peaked when Israel initiated Operation Rising Lion, targeting military and nuclear facilities in Iran. In response, Iran launched its own retaliatory strikes targeting the Israel (Barnea, 2024). The attack was enabled by significant intelligence oversights. Israeli intelligence misjudged Hamas' intentions, believing that the group was mainly focused on governance in Gaza and unlikely to instigate a significant Israeli reaction. The magnitude of the attack, for which Israel was unprepared, caused widespread public shock and trauma. This miscalculation led to confusion, prompting rumours to spread as individuals sought information in the chaotic aftermath (Farge & Al-Mughrabi, 2025). The attack and subsequent war triggered a significant surge in news consumption across all Israeli media platforms, a trend consistent with previous regional conflicts (Elishar Malka et al., 2023) (Rajendran & Young, 2024). The adverse effects of geopolitical risks generated by Israel may extend beyond merely impacting energy prices (Altemur et al., 2024; Fernandez, 2014) (Balcilar et al., 2018). The conflict of Israel-Iran has become one crucial issue in the Middle East, with significant consequences for global economic governance. The various economic impacts arising from this regional turmoil, particularly how geopolitical tensions affect international trade patterns, commodity prices, and investment flows. The analysis emphasizes the influence of sanctions and economic measures imposed on Iran, which not only disrupt its economy but also generate considerable ripple effects on global markets (Adibian, Mohammad Sadegh; Salari, Taghi Ebrahimi; Moghadam, 2025) (Dharen Kumar Pandey, 2024). The Iranian financial market displays a greater sensitivity to fluctuations in oil prices compared to oil production shocks. Additionally, this market is influenced by geopolitical events related to Turkey and Israel, less affected by situations of Egypt and Saudi Arabia (Irina Kalina and Kazi Sohag, 2025). Hence this research, by capturing crude oil price, assess the influence of Israel-Hamas War on index.

2 Review of Literature

2.1 Market Efficiency and Event Studies

Research indicates that markets do not consistently demonstrate efficiency in all forms of market efficiency. Markets may exhibit efficient characteristics at certain times but may not be efficient at others. Consequently, it is suggested that market efficiency is time-varying (T. Mallikarjunappa, Diana Saldanha, I.T. Hawaldar, 2025). As the most developed and transparent energy market, the oil market is crucial within the global energy market framework. According to the BP Energy Outlook 2023, China is expected to surpass Europe and become the largest energy importer worldwide by 2040. In an effort to have a more significant influence in the global crude oil marketplace (Shao and Hua, 2022) (Kyohun Joo, Jong Hwan Suh, Daeyong Lee, Kwangwon Ahn, 2020). The event study understands how investors respond to occurrences impacting

one or more publicly traded companies. This method includes discussions on modelling normal returns, calculating abnormal returns, and drawing conclusions (Sadok El Ghoul, Omrane Guedhami, Sattar A. Mansi, and Oumar Sy, 2022) (Saad Benbachir, Satt Harit, and Assya Chraïbi, 2022). Further, the analysis assesses the conflict's repercussions on international stock markets, currency pairs and commodity indices (Dharen Kumar Pandey, 2024).

2.2 Israel Iran War and Crude Oil

The longstanding hostility between Iran and Israel has remained a major source of instability in the Middle East, marked both indirect and direct military confrontations. The ongoing rivalry between Israel and Iran has created a distrust and military responses. In June 2025, tensions peaked when Israel attacked the military and nuclear facilities in Iran. In retaliation, Iran launched its own attacks against critical locations in Israel (Isaac Ahinsah-Wobil, 2025). The emerging threat from Iran's advancing nuclear capabilities and the increasing possibility of a preemptive strike from Israel are examined. The coordinated dialogue between the US and Israel regarding both diplomatic and military plans is crucial to mitigating escalation risks and securing a sustainable resolution to the intensifying Iranian nuclear menace amid rapidly changing regional dynamics (Zoran, A., 2025). Brent crude oil is a low-density, low-sulfur blend that constitutes two-thirds of the global oil supply. It is typically obtained from locations in the Middle East, North Sea regions between the Shetland Islands, Norway, Africa, and Europe. Its pricing is influenced by market speculation relative to Brent. Given its global sourcing and widespread coverage, Brent oil significantly affects global pricing. Brent crude oil futures traded on the Intercontinental Exchange (ICE) are recognized as the international standard in oil trading. Physical traders capture the interest of the broader business and investment community, as oil prices impact equity markets (Sadorsky 2006).

3 Research Methodology

3.1 Research Design

The Daily Returns (DR) were calculated for each day. Thereafter Expected Returns (ER) were calculated. ER is the average returns of 180 days before the pre-event period. AAR is the difference between Daily Returns (DR) and expected returns. CAAR is the summation of AAR over the event period.

In order to ensure that the said event is the prominent event during the event period and that there are no other events in the same period, we have verified that there are no other events like OPEC announcements, US Federal Reserve interest rate changes or Middle East diplomatic breakthroughs during the event period.

3.2 Event Study Timeline

The study makes use of event study. To perform the study, 180 days are estimated (20 days before the pre-event period), which is from May 16th, 2025 to July 11th, 2025; the pre-event period is 20 days (-1 to -20), which is from May 16th, 2025 to June 12th, 2025; and the post-event period is 20 days (+1 to +20 days of the event) i.e., June 16, 2025, to July 11, 2025. Index values of Brent Crude Oil were gathered from the NYMEX, the official website for crude oil prices. Event day or Day 0 is 13th June 2025.

Table 1. Event Study Timeline

Period	Days relative to event	Date range (2025)
Estimation	-200 to -21	Nov 28 – May 25
Pre-event	-20 to -1	May 26 – June 12
Event day	0	June 13
Post-event	+1 to +20	June 16 – July 11

The Table 1 above shows the event study timeline.

3.3 Hypothesis

H₁: There is a significant difference between the Average Abnormal Returns before and after the date of the announcement of the Israel-Iran War on Crude oil.

4 Data Analysis

4.1 Average Abnormal Returns (AAR) and Cumulative Average Abnormal Returns (CAAR) of Crude Oil Index

The Table No.2 below shows the percentage AAR and CAAR of Crude oil index during the pre-event period.

Table 2. AAR and CAAR during the Pre-Event Period

Days	DR	AAR	CAAR	t value of AAR	t value of CAAR
-20	0.51	0.44	0.44	0.19	0.10
-19	-0.93	-1	-0.56	-0.43	-0.13
-18	-0.06	-0.13	-0.69	-0.06	-0.15
-17	-0.59	-0.66	-1.35	-0.28	-0.30
-16	-0.71	-0.78	-2.13	-0.33	-0.48
-15	0.45	0.38	-1.75	0.16	-0.41

-14	-0.14	-0.21	-1.96	-0.09	-0.47
-13	-0.86	-0.93	-2.89	-0.37	-0.65
-12	1.18	1.11	-1.78	0.44	-0.34
-11	-0.26	-0.33	-2.11	-0.13	-0.37
-10	-0.39	-0.46	2.44	-0.18	0.39
-9	1.14	1.07	3.51	0.40	0.52
-8	1.55	1.48	4.99	0.55	0.70
-7	-1.17	-1.24	3.75	-0.45	0.51
-6	0.74	0.67	4.42	0.24	0.59
-5	1.73	1.66	6.08	0.59	0.81
-4	0.86	0.79	6.87	0.28	0.92
-3	-0.25	-0.32	6.55	-0.11	0.92
-2	4.34	4.27	10.82	1.43	1.60
-1	-0.59	-0.66	10.16	-0.23	1.77

Table 3. AAR and CAAR during the Post-Event Period

Days	DR	AAR	CAAR	t value of AAR	t value of CAAR
1	-3.02	-3.09	-3.09	1.54	0.20
2	4.04	3.97	0.88	0.10	0.27
3	0.32	0.25	1.13	1.00	0.94
4	2.58	2.51	3.64	-0.87	0.52
5	-2.08	-2.15	1.49	-2.63	-3.17
6	-6.57	-6.64	-5.15	-2.50	-6.87
7	-4.79	-4.86	-10.01	0.51	-6.50
8	0.8	0.73	-9.28	0.00	-6.39
9	0.07	0	-9.28	-0.01	-6.31
10	0.06	-0.01	-9.29	-0.19	-6.47
11	-0.24	-0.31	-9.6	-0.47	-7.26
12	-0.74	-0.81	-10.41	1.64	-7.02
13	2.98	2.91	-7.5	-0.32	-6.96
14	-0.45	-0.52	-8.02	-0.46	-7.27
15	-0.73	-0.8	-8.82	0.98	-6.91
16	1.87	1.8	-7.02	0.38	-5.37

17	0.82	0.75	-6.27	0.00	-4.61
18	0.06	-0.01	-6.28	-0.68	-4.98
19	-2.21	-2.28	-8.56	-0.79	-4.80
20	2.5	2.43	-6.13	-0.79	-4.8

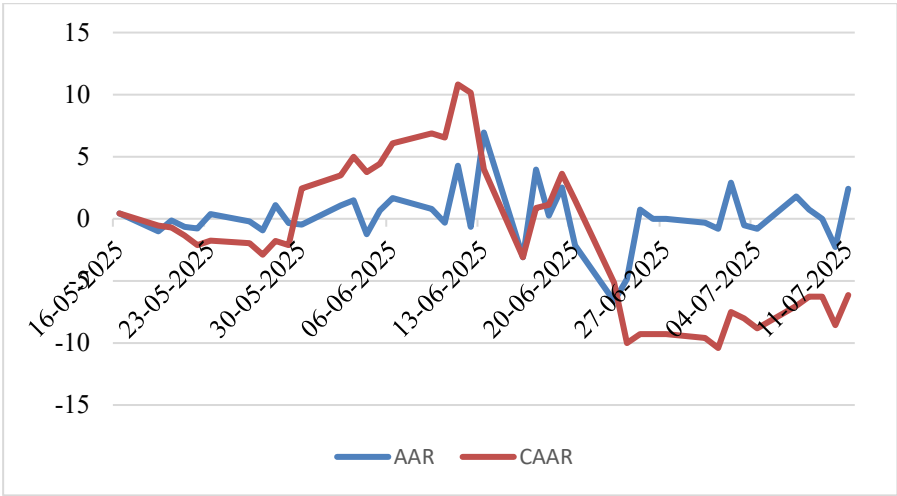


Fig. 1. AAR and CAAR of Brent Crude Oil during the Event Period

In the Fig. 1 above, it is observed from CAAR that the Brent oil index showed greater CAAR pre-war compared to the post war period, indicating the adverse influence of conflict on oil prices. There was a sudden decrease in oil price index following the event date (16th June 2025). The decline trend continued up to a week period (23rd June 2025). Later on, volatility gradually started to become normal. These results are in consensus with reports that “Despite the significant belligerence unleashed by Israel and Iran during the relatively brief war, oil prices did not exhibit the same magnitude of volatility as was observed during similarly disruptive geopolitical crises of past because of more interconnected supply chains”. There was clear impression of conflict.

4.2 Paired Samples Statistics of Oil Price Index

The Table No.4 below shows the paired samples statistics.

Table 4. Paired Samples Statistics of oil price index

	Mean	N	S. D	S. E. Mean
Pre	2.24	20	4.31	.96
Post	-5.87	20	4.34	.97

The mean values of the Brent oil price index decreased, indicating a substantial decline. The Brent oil price index's mean dropped sharply from 2.2405 to -5.8785 signaling heightened sensitivity in the Brent oil price index.

4.3 Paired Samples Correlations of Oil Price Index

The Table No.5 below shows paired samples correlations of Brent oil price index.

Table 5. Paired Samples Correlations of Brent Oil Price Index

Paired Samples Correlations			
	N	Correlation	Sig.
Pre & Post	20	-.29	.21

Non-Significant negative correlations are observed for Brent oil price index ($r=-0.292$, $p=0.212$) which indicate inverse relationship between pre-event and post-event values. These findings reveal that the war was the reason that there is no relationship between the pre and post event periods.

4.4 Paired Samples t-test on Brent Oil Price Index

Table 6. Paired Samples t-test

Paired Differences				t	df	Sig	
Mean	S. D	S. E.	95% Confidence Interval				
			Lower	Upper			
8.1	6.9	1.5	4.8	11.3	5	19	0.0

The Table No.6 above shows the paired samples t test of Brent oil price index. In the study the null hypothesis of no difference in pre and post event AAR is rejected. The alternative hypothesis which says that the Israel Iran war has impacted the crude oil prices is accepted. This result show significant difference in the AARs of the Brent oil price index before and after the announcement of the Israel-Iran War.

5 Discussion

The oil price index saw a drop in mean values, as shown by the Paired Samples Statistics, suggesting a substantial adverse influence. The Brent oil price index's mean dropped sharply from 2.2405 to -5.8785 signaling heightened sensitivity in the oil price market. The results show that the market for oil prices was significantly impacted neg-

actively by Israel-Iran conflict. The oil price had a considerable negative impact, as evidenced by the fall in mean values, according to the Paired Samples Statistics. The results show that there was a noticeable negative effect of the Israel-Iran war on the global oil price. Paired Samples Correlations test showed negative correlations. This indicates negative association between pre-event and post-event values. These results suggest that the Israel-Iran conflict had a significant impact on the price of oil. The findings highlight the clear influence of geopolitical conflicts on the price of oil globally.

6 Conclusion

This study offers important insights into how geopolitical conflicts affect the Brent oil index and attempts to determine how an Israel-Iran war would affect the price of oil. The results highlight how a geopolitical event of this size raises the volatility of the oil price. Market volatility and mood around the world are reflected in the Brent oil price index's sensitivity to such events. The study highlights the critical role of policy makers to shift their importance other than oil sources for energy requirements. The study showed that the Israel Iran war exerted a measurable impact on oil price for short period and then prices stabilised within 20 trading days.

7 Practical Implications

The war's impact on oil price could prompt policymakers to introduce measures to control energy price shocks and reduce dependency on Middle Eastern energy supplies. Banks and financial institutions should incorporate geopolitical risk scenarios, such as an Israel-Iran war, into their stress-testing frameworks to assess potential impacts on their balance sheets. An Israel-Iran conflict could disrupt global supply chains, particularly for energy and raw materials. Companies may need to reassess supply chain dependencies and explore regional sourcing options. The study underscores the need for global coordination among governments and institutions to manage the broader economic and financial surge of geopolitical events. Increased volatility in oil price during such conflicts underscores the importance of other energy sources such as hydroelectricity, solar and CNG.

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