

Five Factors Determining the Severity of Oil Supply Disruptions

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Nearly seven months have passed since the outbreak of the Strait of Hormuz Crisis. Under normal circumstances, this crucial chokepoint handled approximately 20 million barrels per day (mb/d) of oil and 80 million tons per annum (mtpa) of LNG, representing roughly one-fifth of global supply in each respective market. Therefore, it was hardly surprising that the disruption to safe navigation through such a critical artery of global energy trade rapidly destabilized international energy markets. Crude oil prices, petroleum product prices, and LNG spot prices all surged sharply. In particular, the exchange of military attacks between the United States and Iran from late August to early September, together with the geographical expansion of armed conflict in the surrounding region, once again pushed crude oil prices well above the USD 100 per barrel threshold. The escalation in petroleum product and LNG spot prices was even more dramatic, with LNG spot prices at one point soaring to levels equivalent to nearly USD 180 per barrel of oil.

At present, it remains impossible to predict with confidence how the Strait of Hormuz Crisis will evolve or how the global energy landscape will respond. Depending on future developments, energy prices could rise even further, exposing international energy markets to unprecedented turbulence. In contemplating the possibility of further deterioration, it is worthwhile to examine the conditions and circumstances that tend either to exacerbate or to mitigate the consequences of major supply disruptions. Indeed, since the Suez Crisis of 1956, the international energy market, and particularly the oil market, has experienced numerous large-scale supply interruptions. Drawing lessons from these historical precedents may help identify the factors that accelerate, or conversely restrain, market instability following supply disruptions.

To place the current situation in historical perspective, supply disruptions arising from geopolitical events can be ranked by volume lost. The largest on record is the Strait of Hormuz Crisis in 2026, involving a disruption of approximately 20 mb/d. This is followed by the attack on Saudi oil facilities in 2019 (5.7 mb/d), the Second Oil Crisis in 1978 (5.6 mb/d), the First Oil Crisis in 1973 (4.3 mb/d), the Gulf War in 1990 (4.3 mb/d), and the Iran-Iraq War in 1980 (4.1 mb/d). Numerous other examples could be cited, including the Suez Crisis, the Third Arab-Israeli War, the Iraq War, and the Libyan Crisis. It is noteworthy that, during the Ukraine Crisis of 2022, no actual global oil supply disruption occurred. Although Western countries imposed embargoes on Russian oil, much of that supply was redirected to

China and India, thereby preventing any significant decline in total Russian oil exports to the global market. Interestingly, some major supply disruptions have shaken the world as genuine energy crises, while others, despite triggering temporary spikes in crude oil prices, subsided rapidly and failed to generate prolonged market instability.

So, what determines the degree of market disruption following a supply outage? A review of historical experience highlights five critical factors. First, the scale of the disruption itself remains fundamental. More specifically, however, it is not merely the volume lost that matters, but rather the aggregate supply losses in terms of both volume and duration. For example, the 2019 attack on Saudi Arabia's oil facilities resulted in the second-largest supply disruption in history at 5.7 mb/d. Nevertheless, because damaged facilities were restored with remarkable speed, the resulting increase in oil prices proved short-lived and market instability was minimal. In contrast, both the First and Second Oil Crises generated sustained market turmoil because uncertainty persisted regarding how and when the disruptions would be resolved. In this respect, the Strait of Hormuz Crisis deserves particular attention, as seven months have already elapsed and a clear path toward lasting stabilization remains elusive.

Second, the relative importance of oil within the broader energy system strongly influences the severity of a supply disruption. Put simply, the greater the dependence on oil, the greater the economic and geopolitical impact of any interruption in supply. Oil's share of global primary energy consumption rose steadily until reaching a peak of 51 percent in 1973. The First and Second Oil Crises occurred during this period of exceptionally high oil dependence, which amplified their global consequences. Thereafter, however, global dependence on oil gradually declined, reaching approximately 33 percent by 2025. Although oil remains the world's single largest energy source, its reduced relative importance should not be overlooked when assessing either the current Strait of Hormuz Crisis or future oil supply disruptions.

Third, the prevailing balance between supply and demand prior to the disruption exerts a decisive influence. When markets are already tight and oil prices are rising, a supply disruption can trigger a dramatic escalation in prices. Conversely, when markets are characterized by surplus supply, the impact is often moderated. Before the outbreak of the First Oil Crisis, oil prices had already been trending upward throughout 1973 due to tightening market conditions. Similarly, during the Ukraine Crisis, although no actual oil supply disruption occurred, crude oil prices had been climbing since the second half of 2021, and concerns about potential shortages further intensified price increases. In contrast, the Strait of Hormuz Crisis emerged against a backdrop of market oversupply and declining oil prices that had persisted since early 2025. Therefore, one could argue that only a disruption of extraordinary magnitude, such as the loss of 20 mb/d, was capable of reversing market fundamentals so abruptly and driving oil prices toward USD 120 per barrel.

Fourth, the availability of alternative supply sources, including national and private sector petroleum reserves, plays a crucial role. During the First Oil Crisis, the Arab oil-producing countries implementing the embargo were themselves the holders of most available spare production capacity, making alternative supplies difficult to obtain. Furthermore, OECD countries had yet to establish comprehensive oil stockpiling systems, which were developed largely in response to the crisis itself. Consequently, neither increased production nor strategic reserves could be relied upon to offset shortages. It is worth recalling that the International Energy Agency (IEA) first conducted a coordinated stock release during the opening phase of the Gulf War against Iraq in 1991. Since then, strategic stock releases have become a central policy instrument for managing large-scale supply disruptions. In response to the Strait of Hormuz Crisis, the IEA swiftly implemented a coordinated release of 400 million barrels, the largest in its history. Equally important were increased exports via routes bypassing the Strait of Hormuz from Saudi Arabia and the UAE, as well as an additional 2 mb/d of oil exports from the United States. From a broader perspective, global oil inventories had accumulated substantially during the preceding period of market oversupply, enabling inventories to be drawn down as a buffer against the disruption. The availability and scale of alternative supply sources can therefore have a decisive effect on crisis outcomes.

Fifth, the emergence of panic-driven additional demand is often a critical determinant of market behavior. During both the First and Second Oil Crises, uncertainty and fear prompted governments and companies to engage in aggressive procurement, creating additional demand that exacerbated market tightness and accelerated price increases. A similar phenomenon occurred during the Ukraine Crisis when European countries, having lost access to Russian pipeline gas supplies, competed intensely to secure LNG imports. This scramble for LNG contributed to unprecedented gas prices reaching levels equivalent to nearly USD 600 per barrel of oil at their peak. In contrast, no comparable panic buying in the global market has yet emerged during the Strait of Hormuz Crisis. On the contrary, a surprising decline of approximately 6 mb/d in China's oil imports, the largest import reduction among major consuming nations, has helped ease market tightness. Preventing panic-driven purchasing and the resulting surge in additional demand remains one of the most important challenges in managing any major energy crisis.

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