

# Energy Security In Developing Economies: Assessing The Impact Of Middle Eastern Geopolitical Shocks On Vietnam (2020–2026)

PhD. Ngo Thi Hong Hanh  
*University of Labour and Social Affairs*  
hanhnt@ulsa.edu.vn

Nguyen Ngoc Quynh Anh  
*The American School (TAS)*

Truong Thi Tuyet  
*National Economics University*

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## **Abstract**

*This study examines the impact of geopolitical shocks in the Middle East, particularly the conflict involving the United States, Israel, and Iran during the 2020–2026 period, on Vietnam’s energy security. Using a combination of situational analysis and transmission mechanism approaches, the study finds that the disruption of global supply chains and the potential blockade of the Strait of Hormuz have driven Brent crude oil prices to surge dramatically, exerting direct pressure on the Consumer Price Index (CPI) and eroding profit margins of Vietnamese enterprises. The findings indicate that Vietnam has transitioned from a net energy exporter, primarily based on its comparative advantages in crude oil and coal exports to a net energy importer, thereby increasing the economy’s vulnerability to external shocks. The paper further evaluates the effectiveness of the government’s stabilization instruments, including adjustments to Most Favoured Nation (MFN) tariff rates, environmental protection taxes, and the petroleum price stabilization fund. Finally, the study proposes several policy implications, including the development of automatic fiscal risk management mechanisms, the upgrading of strategic energy reserves infrastructure, and the acceleration of the green energy transition roadmap. These measures are essential to enhance the resilience of the Vietnamese economy against future geopolitical uncertainties.*

**Keywords:** Energy security; geopolitical shocks; Middle East; Vietnam

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## **I. Introduction**

During the 2020–2026 period, Vietnam has implemented its Socio-Economic Development Strategy in a context characterized by a mix of opportunities, advantages, difficulties, and challenges. However, the latter have been more dominant. Specifically, not only Vietnam but also countries worldwide have been confronted with multiple adverse shocks, including the COVID-19 pandemic, the armed conflict in Ukraine, and geopolitical tensions in the Middle East. At the same time, Vietnam has been affected by adjustments in tax policies by major economies, ongoing trade tensions, and increasingly frequent and severe natural disasters. Within this complex environment, Vietnam has achieved notable accomplishments in controlling the pandemic and gradually restoring and developing its economy. In particular, the country’s average annual GDP growth rate reached approximately 6.3%, placing Vietnam among the fastest-growing economies in the region and globally. Inflation has been effectively controlled, while the scale of trade has expanded significantly, not only in volume but also in terms of improved growth quality (Tuyenquang.dcs.vn, 2026).

With regard to Middle Eastern countries, there exists a substantial disparity in income levels across the region. Specifically, the high-income group (including Israel and the Gulf Cooperation Council countries) records GDP per capita exceeding USD 40,000. This group demonstrated strong resilience during the pandemic, supported by robust fiscal capacity, high vaccination coverage (above 60%), and gains from rising oil prices. Consequently, Israel and oil-exporting economies were able to maintain low inflation rates (below 3%) and relatively stable exchange rates. In contrast, the developing and lower-income group (such as Egypt, Jordan, Lebanon, and Syria)

reports GDP per capita below USD 15,000. These countries faced significant challenges in vaccine access, experienced large fiscal deficits, and recorded higher COVID-19 mortality rates. Many economies in this group encountered hyperinflation and severe currency depreciation. Notably, Lebanon experienced inflation rates approaching 200% alongside a collapse of its national currency, while Turkey faced inflation exceeding 20% and a depreciation of the Turkish lira by approximately 50%. These macroeconomic instabilities have contributed to rising food insecurity and heightened political instability. From the perspective of economic growth and employment, most countries in the region experienced GDP contractions in 2020. Israel, Egypt, and Turkey were among the few exceptions that exhibited relatively stronger recovery trajectories. In contrast, Lebanon represents a typical case of systemic collapse, where institutional capacity has been unable to recover after prolonged periods of instability. Tourism, which has traditionally been a key source of revenue, accounting for approximately 15% of GDP in countries such as Jordan and Lebanon, which were declined by nearly 70% in 2020. Although recovery was projected by 2025, the escalation of conflicts in early 2026 has significantly constrained the rebound of the tourism sector, particularly in the Levant region. Employment rates in Jordan and the Gaza Strip have fallen to critically low levels. Meanwhile, Saudi Arabia has managed to sustain employment growth for its citizens despite the pandemic. High-income countries effectively leveraged the digital economy to maintain economic activities during the pandemic, whereas approximately half of the students in the Middle East were unable to access remote learning due to insufficient technological infrastructure (INSS, n.d.).

The attack on October 7<sup>th</sup>, 2023, triggered a prolonged conflict in the Gaza Strip, resulting in a severe humanitarian crisis and undermining ongoing efforts toward the normalization of Israel–Arab relations. By early 2026, the conflict had escalated into a direct confrontation involving Israel, the United States, Iran, and Iran-aligned actors (including Hezbollah and the Houthis), pushing the region toward the brink of a broader regional war. Despite ongoing diplomatic efforts, civil conflicts in Yemen and Syria, as well as persistent instability in the Levant, have continued unabated. Notably, 2025 witnessed the collapse of the Assad regime in Syria, creating a new power vacuum in the region. The temporary closure of the Strait of Hormuz, following reciprocal strikes between Israel and Iran, has severely disrupted approximately 30% of global seaborne oil shipments. This development has significantly heightened energy security risks for many countries worldwide, including Vietnam (Khanh Quynh, 2025).

Amid increasing geopolitical and global economic uncertainties particularly the recent tensions involving Iran, the United States, and the energy security of Israel has evolved from a national concern into a critical determinant of global supply chain stability. For a highly open economy such as Vietnam, examining the impacts of energy shocks has become an urgent research priority, grounded in three key dimensions. First, geopolitical risks have intensified disruptions to global supply chains. The world is currently witnessing supply chain fragmentation alongside a resurgence of trade protectionism. Energy serves as the lifeblood of production and plays a pivotal role in global value chains; as such, it is highly susceptible to fluctuations in global oil and gas prices. Second, there has been a structural shift in Vietnam's energy position and dependency. Vietnam has transitioned from being a net energy exporter to a net energy importer in order to sustain its rapid economic growth. The increasing reliance on imported coal, oil, and gas has heightened the economy's vulnerability to external price volatility. Any adverse shocks to energy supply or fuel prices can trigger inflationary pressures and erode the competitiveness of export goods. Third, resilience and adaptive capacity have become critical policy considerations. A country's resilience is not solely determined by its level of energy reserves, but also by the responsiveness and adaptability of its economic system in the face of adverse scenarios.

However, quantitative tools for assessing the extent to which these shocks affect Vietnam's key economic sectors remain limited. Examining the impacts of energy shocks not only helps identify structural vulnerabilities within the economy, but also provides a scientific basis for formulating sustainable energy transition strategies and enhancing Vietnam's economic autonomy in an increasingly volatile global environment. This study aims to analyze the effects of the Iran–United States–Israel conflict on Vietnam's macroeconomic stability by addressing the following research questions: through which transmission channels do oil supply shocks propagate into the Vietnamese economy, and to what extent is Vietnam capable of absorbing such shocks?

## **II. Theoretical Framework**

### **2.1. Energy Security Theory**

In the early stages of human civilization, energy security was primarily associated with ensuring access to combustible materials, mainly wood without incurring excessive risks or costs exceeding their value. From this perspective, the concept of energy security was initially grounded in three fundamental criteria:

**Availability:** The existence of sufficient energy resources.

**Affordability:** The cost of extracting fuel should not exceed its economic value.

**Resilience:** The capacity of energy supply systems to withstand external shocks or disruptions.

Over time, the concept of energy security has been continuously expanded to encompass broader dimensions, including risk mitigation, the role of infrastructure, national energy policies, and sustainable development. Beyond supply security, contemporary approaches adopt a more comprehensive perspective on energy use, incorporating aspects such as energy efficiency, environmental concerns, consumption patterns, and technological progress.

In an increasingly volatile global context, there is no universally accepted definition or theoretical framework of energy security applicable across studies, due to variations in political systems, economic structures, and country-specific risks (Chester, 2009; Winzer, 2012). According to Cherp and Jewell (2013), energy security can be defined as a condition in which essential energy systems operate reliably, risks and constraints are minimized, and adaptation to technological advancements and environmental standards is ensured to support sustainable societal development.

Building upon both traditional and contemporary perspectives, and integrating established criteria with emerging requirements, energy security in the current context can be defined based on the following dimensions:

**(1) Availability:** Physical access to energy resources without disruption from geopolitical tensions or supply chain breakdowns. Gacek and Mišić (2023) emphasize that identifying critical energy systems and their vulnerabilities is a crucial first step in assessing energy security (as cited in Cherp & Jewell, 2014).

**(2) Affordability:** Energy prices must remain at levels that do not impose excessive burdens on the economy or households. Gacek and Mišić (2023) highlight that energy is a scarce resource, and its efficient management is essential to prevent shortages and maintain economic competitiveness.

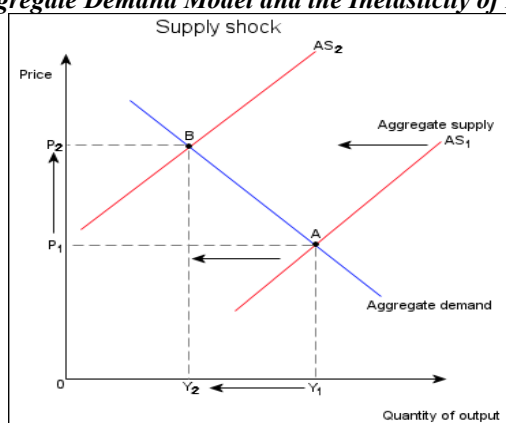
**(3) Energy Efficiency:** The application of technical standards and innovations to reduce energy consumption while maintaining productivity (Cherp & Jewell, 2013).

**(4) Environmental Sustainability:** Compliance with climate standards and ecosystem protection in both energy production and consumption processes (Cherp & Jewell, 2013).

**(5) Social Flexibility:** Changes in consumption patterns and the capacity of social systems to adapt to energy transitions (Cherp & Jewell, 2013).

Within the scope of this study, the authors adopt this modern, five-dimensional framework. However, given the specific nature of energy supply shocks originating from the Middle East, these dimensions are operationalized through corresponding macroeconomic variables.

## 2.2. The Aggregate Supply–Aggregate Demand Model and the Inelasticity of Petroleum Demand



**Figure 1. The Aggregate Supply–Aggregate Demand Model under an Adverse Supply Shock**

*Source: Hoang Thanh Tung and Luong Xuan Duong (2019)*

Initially, the economy is at equilibrium at point A. However, in the presence of an adverse supply shock (such as rising input prices, natural disasters, or pandemics), aggregate supply declines, causing the aggregate supply curve to shift leftward from  $AS_1$  to  $AS_2$ . A new equilibrium is established at point B, where the price level increases while output decreases (Nguyen Thi Van Anh & Luong Xuan Duong, 2021).

The inelasticity of petroleum demand can be explained by several factors:

First, there is a lack of close substitutes. In transportation, industrial machinery, and electricity generation, crude oil and its derivatives (such as gasoline and diesel) play a critical role, with no fully viable or widely adopted alternatives currently available.

Second, petroleum is essential for production. It constitutes a necessary input rather than a luxury good. Even when prices rise, firms must continue purchasing fuel to sustain operations, resulting in relatively small changes in quantity demanded.

Third, structural characteristics of the economy reinforce demand rigidity. Economic growth is closely associated with the expansion of industrial and transportation sectors, generating persistent domestic demand for petroleum products.

Finally, there are adjustment lags. Shifting to alternative energy sources or adopting new technologies requires significant time and capital investment, making it infeasible for firms and economies to respond immediately to increases in oil prices.

### **2.3. Transmission Mechanism**

The transmission mechanism begins when the economy is exposed to a sudden increase in the prices of essential inputs (such as energy and petroleum products). In macroeconomic theory, these inputs function as marginal costs for most production activities in goods and services. As input prices rise, firms' profit margins are compressed at all output price levels. This compels producers to reduce supply, directly shifting the short-run aggregate supply curve leftward and upward (from  $AS_0$  to  $AS_1$ ), thereby disrupting the initial equilibrium at the potential output level  $Y^*$  (Hoang Thanh Tung & Luong Xuan Duong, 2019).

As the aggregate supply curve shifts leftward while aggregate demand (AD) remains unchanged, the economy adjusts along the AD curve to establish a new equilibrium. At this point, the general price level increases from  $P_0$  to  $P_1$ . This reflects the transmission of rising input costs into final goods prices. This phenomenon is referred to as cost-push inflation, indicating that the increase in the overall price level is driven by higher production costs rather than an expansion in consumer demand.

The transmission mechanism further affects consumption and investment behavior. The rise in the general price level reduces real income and purchasing power, leading to a contraction in the demand for goods and services along the AD curve. As production costs remain elevated and market demand weakens, the scale of economic activity declines significantly. Consequently, real output falls from its potential level  $Y^*$  to a lower level  $Y_1$ , pushing the economy into a recessionary state characterized by rising unemployment due to reduced labor demand.

The final stage of the transmission process is the emergence of stagflation, a particularly challenging macroeconomic condition in which rising prices and declining output occur simultaneously. Theoretically, an adverse supply shock driven by higher input costs creates a severe trade-off: the economy deviates not only from the objective of price stability but also from the goal of full employment.

## **III. Vietnam's Energy Security Status and the Impact of Geopolitical Shocks**

### **3.1. Vietnam's Energy Security under the Dimensions of "Availability" and "Sustainability" in the Period 2020–2026**

Vietnam transitioned from a net energy exporter to a net energy importer during the period 2015–2016, as domestic oil and gas fields reached their technical limits and entered a phase of natural decline.

#### **Period 2020–2024**

**Table 1. Fluctuations in Vietnam's Oil and Gas Imports, 2020–2024**

<b>Year</b>	<b>Crude Oil Imports (million tons)</b>	<b>Refined Petroleum Product Imports (million tons)</b>	<b>Total Oil and Gas Import Value (billion USD)</b>
2020	7.3	9.92	6.2
2021	9.8	8.9	11.3
2022	10.74	8.87	18.5
2023	11.14	10.05	13.6
2024	13.44	10.5	14.5

*Source: Compiled from official reports of the General Department of Vietnam Customs and the Ministry of Industry and Trade (2024).*

Vietnam's total oil and gas imports in the period 2020–2024 reached 100.66 million tons, including 52.42 million tons of crude oil and 48.24 million tons of refined petroleum products (diendanxangdau.vn, 2025). Vietnam spent a total of USD 64.1 billion on these petroleum imports (diendanxangdau.vn, 2025). Crude oil imports showed a steady upward trend, increasing from 7.3 million tons in 2020 to 13.44 million tons in 2024 (an increase of 84%). Fossil fuels accounted for 78.46% of the total primary energy consumption of the economy (diendanxangdau.vn, 2025), in which coal played a dominant role at 47.58%, followed by oil at 26.69% and natural gas at 4.18%. This indicates an increasing dependence on external energy supply sources (diendanxangdau.vn, 2025).

This increase has been accompanied by fluctuations in international oil prices, particularly in 2022 when prices surged sharply due to the Russia–Ukraine conflict (diendanxangdau.vn, 2025). According to the General Department of Vietnam Customs, Vietnam’s oil and gas import value peaked at USD 18.5 billion in 2022, reflecting significant financial pressure on the economy. In 2024, although oil prices showed signs of stabilization (around USD 80–85 per barrel), import expenditures remained high due to a substantial increase in import volumes (diendanxangdau.vn, 2025). This situation is partly attributed to the Nghi Son Refinery’s requirement for sour crude oil from Kuwait, creating technological lock-in and reducing flexibility in sourcing alternatives. As a result, Vietnam simultaneously exports sweet crude oil from domestic fields while importing sour crude oil, thereby increasing costs and dependence on international markets. According to the Ministry of Industry and Trade, approximately 60% of crude oil imports in 2024 originated from the Middle East, primarily from Kuwait and Saudi Arabia (diendanxangdau.vn, 2025).

### **Period 2025–2026**

In 2025, Vietnam recorded a net energy trade deficit of approximately USD 16.43 billion (equivalent to 3.2% of GDP) (Tran Viet Dung & Nguyen Nhat Minh, 2026). Of this total, crude oil imports accounted for around USD 7.743 billion, while refined petroleum products reached USD 6.820 billion. The outbreak of conflict on February 28, 2026 pushed Brent crude prices to a peak of USD 126 per barrel, forcing Vietnam to activate emergency fiscal measures, including reducing the Most Favored Nation (MFN) import tariff on petroleum products to 0% in order to mitigate the price transmission mechanism (Nguyen Dinh Tho, 2026). In just the first 2.5 months of 2026, fuel import expenditures amounted to USD 5.27 billion. The unit import price of refined petroleum products surged significantly to USD 717.6 per ton (Nguyen Dinh Tho, 2026). Experts warn that if oil prices remain in the range of USD 90–100 per barrel throughout 2026, Vietnam’s Consumer Price Index (CPI) could approach the target threshold of 4.5%, thereby significantly narrowing the room for monetary policy management (Thu Huong, 2026; Kafi Research, 2026).

The Strait of Hormuz is a strategic maritime route handling approximately 20–25% of global oil trade and 20–22% of global LNG supply (People’s Public Security Newspaper, 2026). Notably, around 80–84% of oil and gas flows through this route are directed toward Asian markets, including Vietnam (Kafi Research, 2026).

The conflict that erupted in the early morning of February 28, 2026 between the U.S.–Israel coalition and Iran severely disrupted supply chains. Crude oil production from the Middle East declined by approximately 70%, resulting in a shortfall of 12–14 million barrels per day in global markets. The conflict not only drove Brent crude prices sharply up to USD 126 per barrel in March 2026, but also increased war risk insurance premiums for oil tankers to 1–2% of hull value, disrupting several shipping routes from the Middle East to Vietnam (Kafi Research, 2026).

### **3.2. Analysis of the Transmission Mechanism of Geopolitical Shocks to “Affordability” and “Energy Efficiency”**

According to Nguyen Thi Nhan (2025), the conflict in the Middle East affects Vietnam’s economy through three closely interconnected transmission channels, including:

**(1) The commodity channel:** The Middle East plays a critical role in the global energy supply chain, particularly in crude oil, liquefied natural gas (LNG), and several intermediate inputs such as fertilizers and chemicals. According to the International Energy Agency (IEA, 2026), the flow of crude oil and petroleum products through the region reaches approximately 20 million barrels per day, accounting for up to 25% of global seaborne oil trade. For Vietnam, this impact is further amplified by a “dual disruption effect” when the Red Sea–Suez Canal route is obstructed. Data from the United Nations Conference on Trade and Development (UNCTAD) indicate that, by mid-2024, shipping capacity through the Suez Canal had declined sharply by 70%, forcing trade flows to reroute via the Cape of Good Hope, with the number of voyages increasing by 89%. This detour around Africa not only prolongs transit time but also directly increases a wide range of costs, including fuel, labor, insurance, and chartering, thereby placing significant pressure on logistics systems and the domestic economy. This demonstrates that the shock in the Middle East is also a logistics shock affecting Vietnam’s entire supply chain. When conflicts heighten the risk of disruptions along strategic transport routes, global oil prices tend to respond strongly, leading to simultaneous increases in fuel costs, maritime freight rates, insurance premiums, and input prices. For Vietnam, the impact is even more pronounced, as logistics costs remain at approximately 16–17% of GDP which is significantly higher than the global average while road transport still accounts for over 70% of domestic freight volume. As a result, fluctuations in diesel prices can be rapidly transmitted into domestic distribution and circulation costs.

**(2) The monetary channel:** When energy prices rise sharply, global inflationary pressures tend to persist. In this context, the USD typically appreciates due to increased demand for safe-haven assets, thereby widening the interest rate differential between USD and VND. This leads to higher import costs and amplifies imported inflation. If the State Bank of Vietnam (SBV) prioritizes growth by maintaining a low interest rate environment

amid rising exchange rate pressures, the risk of VND depreciation may increase. Conversely, an overly early tightening response could raise the cost of capital and hinder economic recovery.

**(3) The market sentiment and capital flow channel:** Major geopolitical fluctuations often trigger capital outflows from frontier and emerging markets as investors shift toward safer assets such as the USD and gold. For Vietnam, this may intensify net foreign selling pressure and slow capital mobilization in financial markets.

Within the scope of this study, based on the transmission mechanisms of geopolitical shocks to the Vietnamese economy, the transmission to petroleum prices can be inferred through the following two channels:

**The price channel:** Retail petroleum prices are determined under a market-based mechanism with state regulation, aligned with global oil price movements and domestic socio-economic conditions in each period. Retail prices (e.g., Petrolimex) are adjusted upward or downward based on a base price formula, which includes import tariffs, excise taxes, value-added tax (VAT), environmental protection tax, and standard cost components. Geopolitical shocks can lead to increases in import tariffs, thereby directly affecting retail fuel prices (thuvienphapluat, 2026).

**The cost channel:** When oil prices surge, importing firms, transportation, logistics, and fuel-intensive industries face significant cost pressures, resulting in higher production costs, reduced competitiveness, and shrinking profit margins. At the same time, rising oil prices also contribute to inflation, affecting interest rates, exchange rates, and the overall investment environment. Conversely, declining oil prices help reduce input costs for businesses but may lower government revenue from crude oil exports and reflect weakening global demand (Nguyen Thi Nhan, 2025).

### 3.3. Impact Analysis

#### *Domestic Petroleum Prices*

The geopolitical conflict between the United States, Israel, and Iran has continued to escalate, leading to disruptions in oil transportation through the Strait of Hormuz, a strategic maritime route that carries approximately 20% of global oil supply (Huyen Vy, 2026). Specifically, Iran’s retaliatory strikes on military facilities of Israel and the United States in the Middle East forced several refineries in the region to shut down to mitigate risks. As a result, the price of RON95 gasoline on March 2, 2026 reached USD 92.780 per barrel, an increase of USD 10.690 per barrel, equivalent to a 13.02% rise compared to February 27, 2026 (immediately before the outbreak of the military conflict between the United States, Israel, and Iran) (Huyen Vy, 2026). Similarly, the price of diesel 0.05S on March 2, 2026 stood at USD 114.530 per barrel, up by USD 22.270 per barrel, or 24.14% compared to February 27, 2026; kerosene prices on the same date reached USD 116.460 per barrel, increasing by USD 22.890 per barrel, or 24.46% (Huyen Vy, 2026). Notably, kerosene prices on March 4, 2026 surged dramatically to USD 231.420 per barrel, an increase of USD 101.190 per barrel, equivalent to a 77.70% rise compared to the previous day, March 3, 2026 (Huyen Vy, 2026).

#### *Supply Chain Disruptions*

Iran announced the closure of the Strait of Hormuz, a strategic maritime route transporting approximately 13 million barrels of oil per day, equivalent to 31% of total global seaborne crude oil trade. This move forced hundreds of oil tankers to either anchor or reroute via the Cape of Good Hope, significantly increasing both transportation costs and transit time (Government Electronic Newspaper, 2026). The disruption of shipping through the Strait of Hormuz has heightened risks to international trade activities. Many oil tankers have had to alter their routes, leading to sharp increases in freight and insurance costs due to security concerns. As of March 2, 2026, at least two large crude oil tankers had been hit by missiles, while several liquefied gas production facilities in the Middle East were attacked, causing substantial damage (Thanh Thuong, 2026).

**Table 2. Correlation between Brent Crude Oil Prices and Vietnam’s CPI (2020–2026)**

Year	Brent Crude Oil Price Trends	Average CPI in Vietnam	Context and Correlation
2020	Sharp decline due to the COVID-19 pandemic	3,2%	Oil prices fell to record lows, yet inflation remained at a moderate level due to a significant increase in pork prices (VNDIRECT, 2025).
2021	Gradual recovery from the bottom	1,8%	Weak correlation due to subdued aggregate demand and supply chain disruptions caused by lockdowns (Ngo The Chi & Hoang Thi Huyen, 2025).

<b>2022</b>	Sharp surge (Russia–Ukraine conflict)	3,2%	Oil prices exerted strong cost-push pressure, with a positive correlation becoming increasingly evident (VNDIRECT, 2025).
<b>2023</b>	Stabilized around USD 75–80	3,3%	Flexible price management helped keep inflation stable despite fluctuations in energy prices (Ngo The Chi & Hoang Thi Huyen, 2025).
<b>2024</b>	Relatively stable fluctuations	3,6%	Inflation edged up due to rising pressures from industrial input costs (VNDIRECT, 2025).
<b>2025</b>	Declined to an average of USD 68	3.3% (Estimated)	Easing oil prices provided positive support in keeping inflation below the 4.5% target (VNDIRECT, 2025).
<b>2026</b>	Price shock: USD 90–126	3.8%–4.5% (Forecast)	The Middle East conflict triggered a severe supply shock, driving a sharp increase in inflation (Nguyen Dinh Tho, 2026).

*Source: Compiled by the research team from the National Statistics Office (Ministry of Finance) and Investing.com (2025).*

In the early stage of the COVID-19 pandemic, the correlation between global oil prices and Vietnam’s CPI remained weak due to the dominance of idiosyncratic domestic factors and the abrupt contraction in aggregate demand. In 2020, although Brent crude prices declined sharply amid the paralysis of global trade, CPI was maintained at 3.2%, mainly driven by pressures from the food group (notably the surge in pork prices). Moving into 2021, inflation fell to 1.8% despite a modest recovery in energy prices; this phenomenon can be explained by supply chain disruptions and strict lockdown measures, which weakened purchasing power and dampened the transmission of energy cost increases into final goods prices.

From 2022 onward, as geopolitical conflicts (notably the Russia–Ukraine conflict) escalated, the transmission mechanism from oil prices to CPI became more consistent. The sharp rise in oil prices generated strong cost-push inflationary pressures, directly affecting the transportation sector and indirectly spreading to energy-intensive industries. Although the government implemented flexible price management measures and deployed emergency fiscal tools (such as reductions in environmental protection taxes) to contain CPI within the range of 3.2%–3.6%, the upward trend of inflation indicates that the economy has increasingly absorbed external price shocks from international energy markets, particularly as Vietnam transitions into a net energy-importing country.

The year 2025 is expected to remain relatively stable, with easing oil prices helping to contain CPI at around 3.3%. However, the 2026 scenario characterized by a potential “oil price shock” (possibly reaching USD 126 per barrel) due to the closure of the Strait of Hormuz and poses significant challenges. With CPI projected to range from 3.8% to 4.5%, inflationary pressure is not only a cost factor but also a systemic energy security risk. Supply disruptions from the Middle East may generate compounding effects, pushing economy-wide production costs to a new equilibrium level and posing direct threats to long-term macroeconomic stability objectives.

The relationship between oil prices and CPI in Vietnam operates through three main channels: the direct channel (retail fuel prices), the indirect channel (transportation costs and production inputs), and the expectations channel (firms’ price-adjustment behavior). Empirical evidence suggests that government stabilization instruments such as the Petroleum Price Stabilization Fund and adjustments to MFN tariff rates which have played a crucial shock-absorbing role. However, when oil prices exceed controllable thresholds (as projected for 2026), the effectiveness of fiscal interventions becomes constrained, necessitating a strategic transition toward green energy and the upgrading of strategic reserves infrastructure to enhance the economy’s resilience to external shocks.

#### **IV. Assessing Social Flexibility through Vietnam’s Resilience Capacity**

##### **4.1. Policy Responses**

###### *Adjustments to Tax Rates and Preferential Import Tariffs on Selected Petroleum Products*

The Government assigned the Ministry of Finance to take the lead, in coordination with the Ministry of Justice, the Ministry of Industry and Trade, and relevant agencies, to urgently draft a decree amending the Most

Favoured Nation (MFN) preferential import tariff rates on selected petroleum products under the Preferential Import Tariff Schedule. Specifically, MFN import duties on certain petroleum products are to be reduced to 0% in order to enable key importers to diversify supply sources and proactively secure imports, thereby ensuring adequate domestic supply (Government Electronic Newspaper, 2026). At the same time, the Government emphasized that in cases where domestic refineries fail to meet their contracted output levels, the Ministry of Industry and Trade will assess the domestic petroleum supply–demand balance and direct key distributors to utilize commercial reserves or release national petroleum reserves, in accordance with legal provisions governing state reserves, to offset market shortages.

#### *Application of the Petroleum Price Stabilization Fund*

Immediately following the outbreak of the Middle East conflict on February 28, the petroleum price stabilization fund was promptly activated. From March 10, disbursement levels increased to approximately VND 4,000 per liter for gasoline, VND 5,000 per liter for diesel, and around VND 4,000 per kilogram for kerosene and fuel oil; these levels were subsequently reduced to approximately VND 3,000–4,000 per liter by the end of March (Industry and Trade Newspaper, 2026). This indicates that a portion of price pressure was effectively “absorbed” rather than fully transmitted to retail prices. Developments in March 2026 further illustrate the role of this mechanism. After several price increases in early March, on March 12 the authorities maintained retail prices unchanged while continuing to deploy the stabilization fund to ease market pressures. By the price adjustment on March 25, E5RON92 gasoline prices decreased by VND 2,039 per liter and RON95 by VND 3,883 per liter; diesel fell by VND 1,767 per liter, kerosene by VND 4,100 per liter, and fuel oil by VND 2,364 per kilogram (Industry and Trade Newspaper, 2026). These represent significant reductions despite persistently high global crude oil prices. The petroleum price stabilization fund does not operate as an independent instrument but as part of a coordinated regulatory framework involving multiple authorities. When global prices rise, the fund is utilized to contain increases; when pressures ease, disbursement levels are correspondingly adjusted. This ensures that policy responses remain proactive rather than reactive, maintaining necessary flexibility in price management.

#### *Fiscal and Regulatory Measures*

Fiscal interventions included reducing MFN import tariffs to 0% during the period from March 9 to April 30, 2026; lowering environmental protection taxes on gasoline (excluding ethanol), diesel, and aviation fuel to 0% from March 26 to April 15; cutting the special consumption tax on gasoline to 0%; and exempting value-added tax (VAT) declaration requirements while still allowing input VAT credits (Department of Domestic Market Management and Development, 2026). The total estimated reduction in state budget revenue amounted to approximately VND 7.2 trillion per month, aimed at stabilizing prices. In terms of regulatory operations, from March 6, authorities were permitted to adjust prices immediately when fluctuations exceeded 7% without waiting for the regular adjustment cycle. From March 19 onward, the response time was further shortened to one day if fluctuations exceeded 15%, thereby mitigating the accumulation of price shocks (Department of Domestic Market Management and Development, 2026).

#### **4.2. Orientation and Roadmap for Biofuel Transition**

Within the broader Southeast Asian context, Vietnam is regarded as one of the frontrunners in the energy transition process. Approximately 13% of the country’s electricity output is generated from solar and wind energy, significantly exceeding the regional average (Thanh Tam, 2026). Vietnam has prioritized the development of clean energy sources such as wind and solar power, while simultaneously reforming policy frameworks to attract international investment into the sector. Just Energy Transition Partnership (JETP) initiatives continue to play a critical role in mobilizing financial resources and technological support for emissions reduction efforts. In parallel, the Government has accelerated institutional reforms, including the development of a carbon market and the introduction of incentives to encourage private sector participation in emissions mitigation. The coordinated implementation of these measures is expected to enable Vietnam to simultaneously ensure energy security amid geopolitical conflicts and global uncertainties, while fulfilling its international commitments on climate change (Vietnamplus.vn, 2026).

#### **4.3. Overall Assessment**

##### *Achievements and Positive Outcomes*

Effective absorption of exogenous price shocks: The Petroleum Price Stabilization Fund (BOG) has functioned as a critical buffering instrument. In March 2026, when global oil prices surged sharply, the Fund was heavily utilized (up to VND 5,000 per liter of diesel) to contain increases in retail fuel prices, thereby contributing to a significant decline in domestic petroleum prices toward the end of the month, despite persistently high global crude oil prices.

The reduction of several tax components, including the Most Favoured Nation (MFN) import tariff, environmental protection tax, and special consumption tax to zero has effectively disrupted the transmission mechanism of international price shocks into the domestic market. This policy has directly supported firms in maintaining production activities and helped keep the Consumer Price Index (CPI) below the 4.5% target threshold.

Improved responsiveness in price management: Regulatory authorities have enhanced policy responsiveness by shortening the price adjustment cycle, allowing intraday price adjustments when fluctuations exceed 15%, instead of waiting for the standard adjustment period. This has helped mitigate the accumulation of price shocks and reduce speculative hoarding behavior among distributors.

#### *Limitations and Implementation Challenges*

Policy responsiveness and implementation lags: Current tax reduction measures remain largely reactive and situation-specific, lacking an automated risk management framework. The legislative process for issuing decrees to adjust tax rates still generates non-negligible policy lags, thereby creating uncertainty in cost expectations for logistics and manufacturing firms.

Heavy fiscal pressure on the state budget: The use of tax instruments to absorb external shocks has resulted in substantial losses in government revenue, estimated at approximately VND 7,200 billion per month. This has significantly constrained fiscal space for other development-oriented public investments.

Dependence on technical infrastructure and technology: Supply diversification policies face major constraints due to the Nghi Son Refinery's reliance on sour crude oil imports from Kuwait. Limitations in domestic refining technology prevent Vietnam from flexibly switching to alternative crude oil sources when Middle Eastern supply routes are disrupted, despite the implementation of import tariff incentives.

Limitations of the strategic reserve system: Petroleum stockpiling is currently managed primarily by key commercial traders under a market-oriented model, creating the risk that inventory decisions are driven by short-term profit objectives rather than national energy security considerations. Moreover, the existing reserve capacity remains insufficient to support effective market intervention over an extended period (3–6 months) in the event of a complete supply chain disruption.

Inelastic economic structure: Despite ongoing energy transition policies, petroleum demand in Vietnam remains highly inelastic due to heavy reliance on road transport (accounting for 70% of freight activity) and persistently high domestic logistics costs (16–17% of GDP). As a result, current price management measures mainly address short-term symptoms rather than the structural sources of vulnerability to global oil price fluctuations.

## **V. Policy Implications**

First, it is necessary to establish a fiscal risk management framework oriented toward automatic stabilization mechanisms. The empirical analysis indicates that current government measures, such as reductions in import tariffs, special consumption taxes, and environmental protection taxes though effective in mitigating price pressures, remain largely reactive and event-driven, particularly during periods of escalating geopolitical tensions. This creates policy implementation lags and increases uncertainty in firms' expectations. Therefore, the Government should design an automatic petroleum tax response matrix based on Brent crude oil price thresholds (e.g., USD 90, 110, and 125 per barrel). Once global oil prices reach these predefined thresholds, corresponding tax rates would be automatically adjusted without requiring the standard decree issuance process. Such a mechanism would eliminate external policy lags in fiscal intervention, thereby enabling financial markets and logistics enterprises to proactively plan marginal costs. This, in turn, would help reduce speculative hoarding behavior that contributes to domestic price distortions.

Second, it is necessary to strengthen supply diversification strategies and upgrade energy infrastructure. The current dependence on Kuwaiti sour crude oil for the Nghi Son refinery, combined with the closure of the Strait of Hormuz, highlights structural vulnerabilities in supply chain flexibility. Accordingly, the Government should implement a technological upgrading roadmap for domestic refineries by investing in more advanced cracking and processing units. The objective is to enable the domestic refining system to process a wider range of crude oil types, from domestically produced sweet crude to imported sour crude sourced from regions outside the Middle East, such as the United States, West Africa, and Brazil. In parallel, strategic petroleum storage infrastructure should be upgraded and gradually shifted from a commercially managed model to a state-managed system. This transition would ensure that national reserves are not influenced by short-term profit incentives of key traders, thereby establishing a sufficiently large buffer stock capable of supporting market intervention for at least 3–6 months in the event of a complete disruption of supply chains through strategic maritime chokepoints.

Third, it is necessary to enhance the price elasticity of energy demand through structural transformation. The study indicates that the price elasticity of petroleum demand in Vietnam is low. When demand is highly inelastic, supply shocks tend to generate sharp price increases while consumption volumes cannot adjust immediately. This implies that policy efforts should focus on accelerating the adoption of biofuels (E5 and E10).

In addition, preferential corporate income tax incentives should be introduced for logistics firms transitioning to electric or hydrogen-powered vehicles. The medium-term objective is to decouple GDP growth from fossil fuel consumption. As the economy increases the share of renewable energy and improves energy efficiency, the energy demand curve is expected to become more elastic. This would effectively reduce the steepness of the supply–demand response, thereby lowering the pass-through effect of global oil price fluctuations into domestic CPI.

Fourth, monetary policy should be conducted under an inflation-targeting framework in the context of supply shocks. In the early months of 2026, upward pressure on the VND/USD exchange rate increased by 3.5%, while cost-push inflation placed the State Bank of Vietnam (SBV) in a trade-off between growth and stability. In the case of a temporary supply shock originating from the Middle East, the SBV may allow inflation to fluctuate within a wider tolerance band around the 4.5% target in the short run, in order to avoid excessive monetary tightening that could adversely affect production activities. Coordination with fiscal policy is a critical prerequisite. As the Government has already absorbed part of the price shock through fiscal measures (including a reduction in tax revenue of approximately VND 7,200 billion per month), the SBV should focus on managing exchange rate expectations to prevent second-round imported inflation. This policy coordination ensures that firms' cost of capital is not simultaneously driven up by both higher input prices and tighter financial conditions, thereby safeguarding profit margins in the manufacturing sector.

Fifth, it is necessary to restructure the logistics network and domestic supply chains. High logistics costs (16–17% of GDP) and heavy dependence on road transport result in rapid pass-through of fuel price changes into consumer prices. Empirical evidence indicates that rerouting maritime transport via the Cape of Good Hope has significantly increased international logistics costs. To offset this, Vietnam must reduce domestic logistics costs to prevent an excessive rise in total supply chain expenses. Diversifying transport modes will reduce the sensitivity of goods prices to fluctuations in diesel prices, thereby lowering the overall transmission elasticity of global oil price shocks into the domestic economy.

## VI. Conclusion

*This study systematizes and provides an in-depth analysis of the impacts of geopolitical shocks in the Middle East during the period 2020–2026 on Vietnam's energy security and macroeconomic stability. The findings indicate that, given Vietnam's high degree of economic openness and its transition toward a net energy-importing position, the economy is increasingly vulnerable to global oil price volatility and supply chain disruptions at strategic chokepoints such as the Strait of Hormuz. The 2026 supply shock demonstrates that petroleum price fluctuations are transmitted not only through production cost channels but also exert significant pressure on the inflation-targeting framework and the exchange rate regime. Although the Government has implemented flexible policy responses through fiscal instruments (tax exemptions and reductions) and the Petroleum Price Stabilization Fund to absorb shocks, the economy's resilience remains constrained by dependence on imported refining technology and persistently high domestic logistics costs.*

*However, the study also has several limitations. Due to the complexity and unpredictability of geopolitical conflicts, the precise quantification of market sentiment effects and foreign indirect investment flows has not been fully disentangled. In addition, the analysis primarily focuses on conventional energy sources (oil and gas), while the role of renewable energy is considered only at a directional level without assessing its immediate substitutability in prolonged crisis scenarios. Future research could develop a Computable General Equilibrium (CGE) model to measure the spillover effects of energy shocks across specific sectors. Furthermore, deeper investigation into carbon market mechanisms and green finance solutions is needed to enhance Vietnam's energy autonomy in the context of an increasingly uncertain global environment.*

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