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Geopolitics and Energy Security: A Study on India's Strategic Response to Disruptions in the Strait of Hormuz

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Abstract - The Strait of Hormuz has gradually emerged as a significant region in terms of the economic and geopolitical patterns of the world powers. In the contemporary power struggles, it has become a most important contesting ground for global dominance. Global supply chains are increasingly shaped by geopolitical risks, particularly in critical maritime choke points such as the Strait of Hormuz. This research analyses the Geo strategic significance of The Strait of Hormuz and the interests of regional and great powers in it. Subsequently, this study examines India's Geopolitics and Energy Security policy in response to the disruptions brought about by the US-Israel war on Iran. This study employs a qualitative analytical approach grounded in geopolitical theory and policy analysis. This study employs a qualitative analytical methodology based on policy analysis and geopolitical theory. Additionally, it evaluates India's diplomatic efforts, strategic petroleum reserves, diversification plans, and shifts to renewable energy. The findings indicate that although India has made significant strides in strengthening resilience, structural vulnerabilities still exist because of the country's substantial dependence on imports. This paper significantly contributes to the discourse on energy geopolitics by offering policy insights into strengthening India's long-term energy security objectives.

.**Key Words:** Energy Security, Geopolitics, India, Strait of Hormuz, Supply Chain Disruptions, Strategic Policy.

1.INTRODUCTION

Energy security has become a key concern in international political economy, particularly for economies that are growing rapidly. India is one of the world's largest energy consumers, relies on imported crude oil, with a substantial proportion transiting through the Strait of Hormuz. This narrow maritime passage accounts for nearly one-fifth of global petroleum flows, making it one of the most strategically significant chokepoints in the global energy architecture.

Middle East has always been vulnerable point of energy supply chain as it has witnessed numerous conflicts, sanctions, and military confrontations. The Strait of Hormuz lies in the world's most important oil chokepoint, disruptions in the strait can cause price volatility, supply shortages, and macroeconomic instability in importing countries like India. Against this backdrop, this paper explores how India navigates these geopolitical risks through strategic policy interventions.

2. LITERATURE REVIEW

Energy security has become a major factor in India's national security thinking and policy as its economy has begun to record high rates of growth. The criticality of ensuring access to foreign oil and gas resources will only increase with time as the gap between its demand and its domestic production widens. The concept of energy security has evolved from a narrow focus on supply availability to a broader framework encompassing affordability, accessibility, and sustainability (Cherp &

Jewell, 2014). Scholars such as Yergin (2006) emphasize diversification as a key strategy to mitigate supply risks, while others highlight the role of geopolitics in shaping energy markets.

Studies on maritime chokepoints underscore the strategic importance of the Strait of Hormuz, noting its susceptibility to geopolitical disruptions (Khalid, 2018). Kazuhiro Nakatani (2024) predicted risk concerning the Strait of Hormuz and the need for Strait of Hormuz Forum. Obstruction of passage by Iran, interdiction of passage by terrorist or pirates, ship grounding by accident are among the hypothetical risks concerning the Strait of Hormuz**.**

Research on India's energy policy indicates increasing efforts toward diversification and renewable energy adoption, yet highlights persistent dependence on West Asian oil imports (IEA, 2023).

However, there remains a gap in integrating geopolitical risk analysis with policy governance frameworks specific to India's response to Hormuz-related disruptions.

3. THEORETICAL FRAMEWORK

This paper is grounded to geopolitical pragmatism and Geopolitical economics of India towards the disruptions caused by the US-Israel war on Iran, which forced Iran to block the Strait of Hormuz - the world's most important oil choke point. This paper also critically analyses the Possibilities and Challenges for India with focus to recent Geopolitical developments in the Middle-East . Geopolitical economics provided a constructive framework for addressing the economic implications of closure of the Strait of Hormuz.

Geopolitical pragmatism in current context**,** posits that India has prioritized national security and strategic autonomy, particularly in securing critical resources like energy.

Geopolitical economics in the current context emphasizes the use of Geopolitical, economic tools and policies to achieve geopolitical objectives.

Conjunction of these frameworks helps explain India's multi-dimensional and strategic response involving diplomacy, diversification, and infrastructure development.

4. METHODOLOGY

This paper adopts a qualitative analytical approach grounded to geopolitical theory and policy analysis, relying on

(a) Secondary data from government reports (e.g., Ministry of Petroleum and Natural Gas)
(b) International databases (e.g., International Energy Agency)
(c) Academic literature and policy papers.
A thematic analysis was used to identify key strategic responses and policy patterns.

5 STRATEGIC IMPORTANCE OF THE STRAIT OF HORMUZ

The word (strait) from the linguistic point of view means: a narrow place/ passage of water. In geographical terms, it means the narrow natural waterway that separates Iran from the United Arab Emirates and Oman. In international law, a waterway is narrow if:

(a) A narrow natural waterway does not exceed twice the territorial sea limit.
(b) It connects two high seas, or a regional sea to a high sea.
(c) It is used for international navigation.

The Strait of Hormuz is important as a sea corridor for the Gulf States and Iran, linking the Indian Ocean and the Arabian Gulf, in addition to its strategic importance as a major entry point for the imports of the Gulf States. It is a crossing for exports of countries with the largest oil reserves in the world, as well as production and marketing to the markets of East Asia, Europe and North America . It is important not only as a vital trade corridor, but also for its own wealth in supporting the economy. It has tremendous economic, oil and financial capabilities – and economic life is the basis of social and political life. The pearl and fisheries trade contribute significantly to the national production of the Gulf states. Strait of Hormuz by far remains the world's most important oil choke point, with an estimated 15.5 million barrels of oil flowing through it per day. Approximately 60% of India's crude oil imports pass through this route.

The Strait of Hormuz faces several critical risks, including military conflicts—particularly tensions between the United States and Iran—as well as tanker seizures, blockades, and piracy-related maritime insecurity. These threats significantly increase the vulnerability of global energy transit and supply chains.

For India, which relies heavily on energy imports passing through this chokepoint, any disruption can have serious economic consequences. Even short-term disturbances may lead to rising oil prices, a widening trade deficit, and increased inflationary pressures, thereby affecting overall macroeconomic stability.

6. INDIA'S STRATEGIC RESPONSE

India's response so far to the ongoing crisis reflects a strategic model of crisis management, blending naval capability with diplomatic access.

6.1 Diversification of Energy Sources

India has actively diversified its crude oil import sources beyond the Middle East, increasing procurement from countries such as the United States, Russia, and African producers including Nigeria and Angola. This strategy has reduced over-reliance on a single geopolitical region, particularly the Middle East, which remains vulnerable to periodic disruptions. However, this diversification is not without trade-offs, as it may recalibrate India's traditionally strong energy and diplomatic engagements with Middle Eastern partners rather than sever them entirely.

*6.2*Strategic Petroleum Reserves (SPR)

India has developed Strategic Petroleum Reserves (SPRs) as a key pillar of its energy security strategy to mitigate risks arising from external supply disruptions, particularly in critical transit routes such as the Strait of Hormuz. These reserves, located at Visakhapatnam, Mangaluru, and Padur, have a combined capacity of approximately 5.33 million metric tonnes, equivalent to about 9–10 days of crude oil consumption. Managed by the Indian Strategic Petroleum Reserves Limited under the Ministry of Petroleum and Natural Gas, these reserves act as a buffer against short-term supply shocks and price volatility. While India is expanding its SPR capacity to enhance resilience, its current reserves remain modest compared to the 90-day stockholding benchmark followed by members of the International Energy Agency, highlighting the need for continued strategic investment..

6.3 Diplomatic Engagements

India has strengthened diplomatic engagement with key energy suppliers, including Saudi Arabia, the United Arab Emirates, and Iran, to secure stable and long-term energy supplies. These relationships are reinforced through strategic partnerships, bilateral agreements, and continuous high-level diplomatic interactions aimed at ensuring supply continuity and managing disruptions. Recent engagements with Gulf countries highlight India's proactive energy diplomacy in addressing supply uncertainties and maintaining trade flows amid regional instability. Energy diplomacy thus plays a critical role in enhancing supply security, facilitating crisis management, and strengthening India's position within the global energy landscape.

6.4 Maritime Security and Naval Presence

India has significantly enhanced its naval capabilities to safeguard critical sea lanes of communication, particularly those linked to energy imports. Through sustained anti-piracy operations and dedicated escort missions for oil tankers, the Indian Navy plays a pivotal role in ensuring the security of maritime trade routes. These efforts are especially vital in strategically sensitive regions such as the Strait of Hormuz, where disruptions could severely affect energy flows. Consequently, maritime security initiatives form an essential component of India's broader energy security and geopolitical strategy

6.5 Transition to Renewable and Green Energy

India's transition towards renewable energy, particularly solar and wind reflects a strategic effort to reduce long-term dependence on imported fossil fuels and enhance energy security. Over time, the government has progressively prioritized sustainable energy development through targeted policy interventions and investment frameworks.

Key initiatives such as the National Solar Mission and the National Green Hydrogen Mission highlights this shift toward a cleaner and more self-reliant energy system. Subsidy for EVs has been a bold move by the government towards the renewable and green energy push. Collectively, these initiatives indicates a structural transformation aimed at achieving sustainable growth while mitigating external supply dependence.

7. CHALLENGES AND LIMITATIONS

Despite significant progress in strengthening energy security, India continues to face several structural and strategic challenges that constrain the overall effectiveness of its policy response. A major concern is the country's high import dependency, with over 80% of its crude oil requirements sourced from international markets, making it highly vulnerable to global price volatility and external supply shocks. Additionally, infrastructure constraints—particularly the limited capacity of Strategic Petroleum Reserves (SPR)—reduce India's ability to effectively buffer against short-term disruptions. Geopolitical uncertainty, especially persistent instability in the Middle East, further exacerbates supply risks given the region's centrality to India's energy imports. Moreover, the transition towards renewable energy, while essential for long-term sustainability, entails substantial financial commitments and technological investments, placing additional pressure on public and private resources. Collectively, these factors pose significant limitations to the resilience and adaptability of India's current energy security strategies.

8. POLICY IMPLICATIONS

To further strengthen energy security, India must adopt a comprehensive and forward-looking policy framework that addresses both immediate vulnerabilities and long-term structural challenges. First, expanding Strategic Petroleum Reserves (SPR) is essential to enhance resilience against supply disruptions; increasing storage capacity would enable the country to maintain adequate buffers during periods of geopolitical or market instability. Second, enhancing regional cooperation with major Asian energy importers such as China, Japan, and South Korea can facilitate coordinated responses, joint procurement strategies, and shared infrastructure development, thereby improving collective energy security. Third, investing in alternative supply routes—including cross-border pipelines and diversified maritime corridors—can reduce overreliance on critical chokepoints such as the Strait of Hormuz. Fourth, accelerating the energy transition through the promotion of renewable energy sources and electric mobility is crucial for reducing fossil fuel dependence and achieving sustainability goals. Finally, strengthening risk assessment mechanisms by systematically integrating geopolitical risk analysis into energy planning processes will enable more proactive and adaptive policy responses. Collectively, these measures can significantly enhance India's strategic capacity to navigate an increasingly complex global energy landscape.

9. DISCUSSIONS

The geopolitical significance of the Strait of Hormuz makes it a critical focal point in global energy security. For India, disruptions in this region pose substantial economic and strategic risks. While India has undertaken significant measures—including diversification, strategic reserves, and renewable energy expansion—structural vulnerabilities persist. There is a need to complement diversification with a stronger domestic architecture. First, India's reserve framework remains narrowly focused on crude oil. China's use of strategic reserves for key inputs such as Sulphur further reinforces supply stability for downstream sectors. Extending this logic, a Strategic Fertilizer Reserve (SFR), covering urea, Sulphur, and phosphates, remains a missing institutional layer in India's framework.

Beyond reserves, gas-related vulnerabilities—among the most binding in the current crisis—require differentiated responses. Liquefied Petroleum Gas (LPG) exposure is driven by high import dependence and minimal storage, necessitating investments in cavern storage, floating reserves, and gradual substitution through Piped Natural Gas (PNG) and electrification.

In the fertilizer sector, the priority is to scale hydrogen-based green ammonia, supported by long-term energy supply and pricing frameworks under the National Green Hydrogen Mission. In cooking energy, reducing LPG dependence will require accelerating electrification in urban and peri-urban areas, alongside expanding piped gas networks where viable, to diversify household energy sources. More broadly, renewable energy deployment must be integrated with industrial demand through improved grid reliability and expanded storage capacity, enabling round-the-clock renewable supply. However, progress across these dimensions remains uneven, limiting substitution at scale.

India should take a proactive diplomatic initiative by proposing the establishment of a Strait of Hormuz Forum to enhance regional stability and safeguard global energy flows. Given the strategic importance of the Strait of Hormuz, such a forum could serve as a multilateral platform involving key stakeholders—including major

energy exporters like Saudi Arabia, Iran, and the United Arab Emirates, as well as major importers such as India, China, and Japan. The forum could focus on ensuring freedom of navigation, coordinated maritime security, crisis de-escalation mechanisms, and real-time information sharing to prevent supply disruptions, while also facilitating dialogue on infrastructure protection and promoting confidence-building measures among regional actors. For India, leading such an initiative would strengthen its role in global energy governance, reduce vulnerability to geopolitical shocks, and contribute to long-term energy security and stability in this critical corridor.

A comprehensive and forward-looking policy framework—integrating geopolitical foresight, economic resilience, and a sustainable energy transition—is essential for ensuring long-term energy security. This paper also highlights the need for a practical and adaptive strategy to effectively navigate an increasingly complex and evolving geopolitical landscape.

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BIOGRAPHIES

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