

Energy Security: An Eto-Cognitive Approach

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Abstract:

Energy resources, primarily oil and natural gas, have long been crucial for the economies of nations, particularly major industrialized ones. Energy security ranks among the highest priorities for countries as they strive for overall security. Given the significant global changes unfolding across various domains, including energy security, there is a pressing need to focus on conceptual

frameworks that can adapt to evolving contexts.

This study seeks to analyze conceptual structures pertaining to the concept of energy security, examining it from multiple angles. These perspectives include the geopolitical lens, the environmental standpoint, and the intricate network-based perspective. Through this analysis, the aim is to gain a comprehensive understanding of energy security and its implications.

Keywords: Concept of energy security; determinants of energy security; energy security; Security.

Introduction:

The dynamics of the international landscape following the Cold War era precipitated significant shifts in the understanding of security, broadening its scope to encompass diverse realms such as humanitarian, cultural, social, and even food-related concerns, alongside the traditional focus on energy issues central to our investigation. The term "energy security" has gained prevalence among policymakers, business leaders, and scholars, complicating attempts to pin down its precise definition.

Consequently, this study endeavors to delineate the concept of energy security within the broader framework of security studies, elucidating its significance by outlining its determinants and avenues for attainment. The central inquiry guiding this endeavor is: To what extent do the divergent interpretations of energy security mirror the vested interests of the stakeholders involved?

To tackle this issue, we put forward the following hypothesis: The greater the consensus among researchers and stakeholders regarding the

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definition of energy security, the more widespread the understanding of the concept becomes. To explore this subject, we've broken it down into three main components:

1. A conceptual cognitive examination of the term "security."
2. A theoretical conceptual exploration of energy security.
3. Analysis of the determinants of energy security and strategies for its attainment.

Conceptual Definitions:

1- A conceptual cognitive approach to the term security: The term security is one of the basic concepts in international relations.

A- Security in language: It is the opposite of fear or panic and means reassurance, security, and the disappearance of fear. Therefore, the concept of security here means stability and growth of societies, individuals, nations, and peoples, and it means living in safety and stability away from disturbances, wars, and feelings. Which generates fear, and therefore security achieves the nation's well-being, progress, renaissance, and stability. ⁽¹⁾

Likewise, the meanings of the term security in the Holy Qur'an are the opposite of the term fear or panic, and it means a person's feeling of reassurance, security, and absence of threats, whether to himself, his property, his honor, or any of his rights. Where God Almighty says in His Noble Book: "Allah has promised those of you who believe and do righteous deeds that He will certainly appoint them as successors in the land just as He appointed those of before them, and to establish for them the religion which He has chosen for them, and to replace them with security after their fear. They worship Me, not associating with anything. Flee after that, and your friends are the sinners."⁽²⁾

Furthermore, in Surah Quraish, God Almighty says: "The familiarity of the Quraish, the familiarity of them with the journey of winter and summer, so let them worship the Lord of this House, who has fed them against hunger and protected them from fear" ⁽³⁾

Through the aforementioned noble verses, we find that the term security is always mentioned by the Almighty in conjunction with the term fear, and this is evidence of the supremacy of security and man's urgent need for it.

B- Security in language: Security, in terms of its terminology, has evolved from a primarily military-focused concept to one encompassing a broader array of threats, including political, economic,

and social challenges. The modern international landscape, with its diverse array of threats and the inadequacy of traditional approaches to address them, has further complicated the notion of security. The distinction between military and non-military aspects of security has become blurred, extending to encompass fields such as technology, education, culture, information, food, and energy. Each of these aspects is now considered integral to the overall security of a nation, with threats in these domains viewed as equally significant as traditional military threats.⁽⁴⁾

Walter Lippman's definition of security emphasizes the secure state of a nation, particularly in its ability to safeguard fundamental values without resorting to war, and its capability to defend these values effectively if threatened⁽⁵⁾. However, this definition leans towards the military aspect, potentially overlooking the broader spectrum of threats encompassed within contemporary security paradigms.

Booth and Wheeler offer a definition of security that underscores the interconnectedness of individuals and groups, positing that stable security necessitates refraining from depriving others of it, framing security as a process of liberation.⁽⁶⁾ However, this definition may be seen as limited as it primarily addresses the aspect of freedom from fear.

Robert McNamara's definition of security expands upon this notion, asserting that security is intrinsically linked to development, emphasizing that true security cannot exist without accompanying development efforts.⁽⁷⁾

Barry Buzan's insights underscore the intricate nature of security as a concept. He emphasizes the importance of understanding security within its political context, delving into its various dimensions, and navigating the inherent ambiguity in its application within the realm of international relations.⁽⁸⁾

These perspectives signal a notable shift in the understanding of security. Historically, prior to the conclusion of the Cold War, discussions on security predominantly revolved around the military dimension. However, the inability to formulate a comprehensive definition during this period highlights the complexity of security. It demonstrates the challenge of fully comprehending its multifaceted nature and the intricate interrelationships among its various dimensions.



2- Contemporary conceptions of security:

Contemporary conceptions of security have broadened to encompass political, economic, social, and cultural dimensions, alongside the traditional military dimension that realist theory previously emphasized.⁽⁹⁾ This expansion reflects a deeper recognition of the diverse array of threats and challenges facing societies in the modern era.

▪ Food security: refers to the provision of food and related supplies, as the United Nations Food and Agriculture Organization (FAO) has identified four foundations for food security, which are: availability, ability to obtain it, use, and stability.⁽¹⁰⁾

▪ Environmental security: means adopting policies, mechanisms and legal frameworks to impose rational management of natural resources and protect the environment from pollution to ensure the continuation of life.⁽¹¹⁾

▪ health security: it is enabling a person to live in an environment that protects him from diseases and also provides him with the right to prevent them, while taking care of all health care requirements.⁽¹²⁾

▪ Societal security: means the set of societal cultural systems and values and the safety of society itself.⁽¹³⁾

▪ Economic security: It is linked to ensuring a minimum income, whether through work, or through a state-sponsored welfare system.⁽¹⁴⁾

▪ Political security: It is linked to ideas, opinions, freedom of expression, and violent and non-violent conflicts. It means: "Empowering citizens of their civil and political rights in a participatory democratic system."⁽¹⁵⁾

▪ Military security: it is mainly concerned with defensive and offensive capabilities and countries' perceptions of each other's intentions.

So all these dimensions of the security phenomenon are integrated, interconnected, unordered dynamic dimensions that affect each other.

A theoretical conceptual approach to energy security:

1- The concept of energy security:

The significance of energy security has surged in tandem with escalating international conflicts over energy resources and the imperative to safeguard their availability amid growing scarcity and demand. As highlighted earlier in this study, the concept of energy security has evolved into a multifaceted and intricate construct, imbued



with numerous political, economic, and strategic implications. Presently, nations worldwide are fervently pursuing strategies to fortify their energy supplies, recognizing the critical role they play in sustaining economic growth, ensuring continuity, and bolstering stability. Anyone who studies the topic of energy security finds it difficult to find a complete and comprehensive definition agreed upon by researchers and academics, due to the multiplicity of approaches and perspectives that address this topic.

Winston Churchill was among the first to articulate the concept of energy security, famously asserting that "Energy security lies in diversity and diversity only".⁽¹⁶⁾ His statement underscores the importance of diversifying energy sources to mitigate dependency on any single source.

Traditionally, the notion of energy security revolves around the assurance of a stable and adequate supply of energy resources at reasonable prices for all nations.⁽¹⁷⁾ For a country to achieve energy security, it must have access to energy resources in a reliable and sufficient manner.

This concept gained further traction following interventions by major powers, notably led by the United States, in regions rich in oil production or reserves, or through which vital supply lines pass. These interventions aimed to ensure the uninterrupted flow of energy resources, highlighting the strategic significance attached to energy security on a global scale. In other words, energy security is based on ensuring sufficient energy supplies from reliable suppliers at reasonable prices in order to maintain a cohesive economic structure.⁽¹⁸⁾

The shortage of supplies and energy crises that the world witnessed in the last century strengthened the concept of traditional energy security, which is mainly linked to security of supply. By achieving security of supply, we can achieve energy security according to this proposition. However, the current reality proves the relativity of this proposition. The energy crises that the world has known in recent times deny that security of supply constitutes the basis for the stability of energy markets and thus achieving energy security, and this is the best evidence. Thus, the energy crisis that Europe is currently witnessing is a result of the Russian-Ukrainian crisis. This crisis did not result from a lack of demand, but rather is due to political, economic, and even

ideological reasons and considerations, in addition to international alliances and balances.

So the concept of energy security varies from one country to another depending on a variety of factors:

- Geographical location.
- Natural Resources
- The economic condition of the country.
- Import and export activities related to energy, and their vulnerability to interruption or fluctuation
- The political system of that country.
- Balances and international alliances.
- International Relations.⁽¹⁹⁾

On this basis, there have been many definitions of energy security according to international organizations, agencies, and major industrialized countries, including:

- IEA definition: “Energy security is continued stability in acceptable and affordable prices, with continued attention to environmental issues.”

The World Bank’s definition: “It is the guarantee by countries of energy and its use in light of its availability at a reasonable cost in order to achieve two main goals: the first is to facilitate economic growth, and the second is to directly improve the standard of living of citizens in order to access modern energy services”⁽²⁰⁾.

- The European Commission defines energy security as the capability to ensure future essential energy requirements through domestic sources, operating under economically viable conditions. Additionally, it involves maintaining strategic preparedness by securing stable and easily accessible external sources, as well as augmenting strategic reserves as a precautionary measure.

• The concept of energy security for both Japan and South Korea means securing sufficient quantities of oil and liquefied natural gas at appropriate prices to maintain their competitive industrial capabilities.

• As for India, energy security is explained as the ability of the population to obtain modern energy services for the sake of sustainable development and political stability.

• While the concept of energy security for oil and gas producing countries is based on securing demand, knowing that a decrease in demand leads to the search for markets with emerging economies.⁽²¹⁾



• Both China and the United States of America define energy security on the basis of their different national interests, although they share in that they aim to diversify sources of energy supply in various geostrategic regions.⁽²²⁾

Therefore, based on the above, we can say that there is no universally accepted definition of energy security that would pass the test of time, and hence the concept of energy security will always depend on the issue of energy security, its threats, and its procedures.

2- Energy security as a theoretical approach:

Among the most prominent theories that dealt with security in its comprehensive sense and energy security in particular, we mention:

The ideal perspective on energy security arose as a response to the lack of security in global politics, particularly influenced by the aftermath of World War I and its profound human and material toll. Originating from the idealist school of thought within security studies, its primary objective was to devise mechanisms aimed at reducing the occurrence of wars and achieving the goals of states.⁽²³⁾

Central to the idealist perspective is the belief in the inherent goodness and cooperative nature of human beings. Accordingly, it advocates for the establishment of institutions that promote and reinforce moral values in international relations, fostering cooperation among nations.⁽²⁴⁾

A fundamental tenet of this theory is the emphasis on collective security as opposed to the balance of power. It contends that states can attain security and peace by adhering to the principle of collective security, which entails mutual cooperation and support among nations. Moreover, the idealist perspective advocates for the promotion of democratic principles and the abandonment of oppressive practices. It posits that democracies are less likely to engage in conflicts with one another⁽²⁵⁾.

The realist perspective on energy security prevailed during the Cold War era, shaping security studies globally. This dominance stemmed from the realist school's novel interpretation of conflict and its distinct perspective on the drivers of non-cooperation. The proliferation of this perspective can be attributed to the intense rivalry between the Soviet Union and the United States, particularly during the Cold War period, which was characterized by a predominant focus on military aspects. Within a tumultuous and competitive international system, nations



prioritized their security and survival by relying on military strength to deter external threats.⁽²⁶⁾

According to realists, energy security is part of national security, and they cannot be separated, and this can only be achieved by increasing military and material power, with the aim of achieving the survival, protection and defense of the state, in light of an international conflict whose main axis is power, and in the absence of an international system or power.

International centrality prevents one country from attacking another. According to the realist school, countries are obligated to provide all means and capabilities to provide energy supplies in order to enhance their strength in any potential conflict.⁽²⁷⁾

Realists also see the need for the state to develop a strategy aimed at protecting areas of influence rich in energy sources, even if that requires military intervention. In light of international competition, every country seeks to protect its energy supplies, which may lead to wars and conflicts.⁽²⁸⁾

What increased the importance of energy security for realists was the first oil economic crisis of 1973, as this crisis prompted the major industrialized countries, led by the United States of America, to increase their influence in areas containing large energy reserves with the aim of protecting their interests, which are mainly represented in ensuring the flow of energy. Energy supplies, starting with the Arabian Gulf region, which contains two-thirds of the world's oil reserves, the Caspian Sea, and Africa, where the United States of America hastened to strengthen its relations with countries that contain large energy reserves, establishing military bases, and concluding agreements and contracts. A partnership to protect and enhance its energy security.⁽²⁹⁾

Supporters of neo-realism argue that the economic factor is paramount in safeguarding national security. According to Robert Gilpin, the strength of a state rests on four pillars: the military, production, finance, and ideas. Thus, merely relying on military might is inadequate for bolstering state power. Neo-realists acknowledge that bilateral or multilateral cooperation in the energy sector between producing and consuming countries is essential for ensuring energy security. This cooperation is exemplified by the formation of international and regional organizations and blocs in the energy domain.⁽³⁰⁾



The liberal perspective on energy security diverges from the traditional focus on the military dimension, instead recognizing the importance of cultural and social dimensions in security. Adherents of liberalism assert that threats are not solely directed at individual states but can also encompass the international community as a whole. Consequently, liberals advocate for collective security, within which energy security holds a significant place.

According to the liberal school of thought, achieving energy security necessitates obtaining energy resources at stable and reasonable prices, minimizing costs where possible. Liberals also acknowledge the finite nature of energy resources, underscoring the importance of international and regional cooperation. To this end, they advocate for the establishment and utilization of regional and international institutions dedicated to addressing energy-related challenges and fostering collaboration in the energy sector. Energy, in addition to providing appropriate means for cooperation, coordination, and exchange of information and expertise in order to achieve energy security.⁽³¹⁾

Liberals consider the issue of war and control of energy resources an issue that does not serve international interests. That is why they emphasize economic cooperation, which increases the interconnection and cooperation of countries, which leads to a tendency to peace and a move away from war.

As for achieving absolute gains, liberals are very concerned about this issue, which is why they find it possible to achieve these gains by increasing the strength of supply and demand, as most of the economies of exporting countries depend mainly on energy resources.⁽³²⁾

The institutional perspective on energy security emphasizes the role of institutions as frameworks that govern cooperation and competition among states. These institutions establish rules that guide states' behavior, enabling them to pursue their interests through cooperation rather than military force. Within this framework, several key institutions play significant roles in securing energy resources.

At the international level, the International Energy Agency (IEA) stands out as a crucial institution in the pursuit of energy security. Regionally, institutions such as the North American Free Trade Agreement (NAFTA) and the Organization of the Petroleum Exporting Countries (OPEC) play important roles. These institutions facilitate the

division of investment activities and provide essential recommendations and data to their members. Moreover, they exert political influence on decision-makers within member countries.

The International Energy Agency, for instance, has contributed significantly to energy security by advocating for the establishment of strategic emergency oil reserves and providing comprehensive information about energy markets. Similarly, NATO plays a vital role in ensuring energy security, particularly given that a significant portion of global oil sales rely on maritime transportation. The organization's presence helps safeguard crucial transit areas such as the Bab al-Mandab Strait, the Strait of Hormuz, the Strait of Gibraltar, the Suez Canal, and the Gulf of Guinea, which are often susceptible to geopolitical tensions and disruptions.

It is often vulnerable to tensions and security threats, which leads to obstruction of energy supplies and thus the occurrence of crises and fluctuations in global markets, and therefore NATO plays a role.

It is significant in collecting intelligence information through coordination and joint teamwork, whether among its members or with other countries, to protect energy security.⁽³³⁾

Determinants of energy security and ways to achieve it:

1- Determinants of energy security:

In order to understand the true and comprehensive meaning of energy security, we must address its determinants, which we can review through its four elements: availability, accessibility, adaptability and affordability.

Availability: Since oil is one of the most important major energy sources in the world, the increasing dependence on it (oil) along with the prices associated with it has become one of the most important challenges facing energy security. The constantly increasing demand for energy is disproportionate to the quantities of supply offered in the global market, and therefore the search for alternative sources of energy harms the sustainability of global consumption.⁽³⁴⁾

Accessibility: Economic and geopolitical factors, in addition to technological progress, are obstacles to access to energy supplies. These obstacles include:

- Unfair distribution of global oil resources.
- Difficulty in accessing undiscovered resources for geographical or technical reasons.



- Lack of qualified labor in the oil and gas industries.
- The high cost of developing and producing non-conventional alternative energies.

However, meeting the growing demand in the future poses a challenge to energy security.

Acceptability: The increasing demand for energy contributes to increasing impacts on the environment. Hence, decision makers around the world are trying to reduce these impacts, including the problem of environmental pollution, through strict implementation of environmental laws regarding energy security.

Affordability: With high fluctuations and large fluctuations in oil prices in the global market due to geopolitical issues, the lack of supply and the imbalance between supply and demand leads to an increasing rise in oil prices. In this case, investment in the oil field must be encouraged during periods of high prices in order to increase supplies and stabilize prices.⁽³⁵⁾

2- Ways to achieve energy security:

Energy security faces new challenges, including meeting the increasing demand for energy, the trend towards the digital world, and the energy sector's efforts to adapt towards sustainability. Therefore, countries must take a set of measures and develop strategies aimed at achieving energy security in the long term. Long ones include:

▪**Risk management:** Risk management is an essential factor for achieving energy security. This process aims to remove risks by diversifying energy sources, absorbing risks by creating a reserve alternative for energy generation capabilities, and preparing to stop supplies by creating strategic reserves.

▪**Reliance on reliable suppliers:** The major industrialized countries always seek to have a major role in shaping the geopolitical features of international relations, especially in the period of shortage of energy supplies, as these countries establish alliances with energy-producing countries that have large global reserves (Gulf countries, for example), and It fears any change affecting the political systems of these allied countries for fear of interruption of energy supplies. (Haqqi Tawfiq, p. 9)

▪**Strategic storage policy:** The previous oil crises (1978-1979) and 1983 prompted energy-consuming countries to develop policies and take measures that would reduce the effects of new oil shocks. For



example, the United States of America established the national Strategic Petroleum Reserve (SPR), which enables it to provide A degree of flexibility to overcome danger during energy crises. ⁽³⁶⁾As for the European Union, it has established a governmental body to manage the reserve oil reserve, which allows the countries of the Union to adopt a common strategy in order to secure their energy needs and confront the risk of supply interruptions.

▪**Diversification:** This strategy opens the way for countries to protect their economies from fluctuations or interruptions in energy supplies and enhance their energy security, by diversifying energy sources and searching for sustainable alternatives. In addition to exploiting its own resources and developing alternative and renewable energy sources such as solar energy and clean energies, in an effort to achieve complete self-sufficiency and thus achieve energy security. In addition to diversifying the sources of energy imports, energy-consuming countries tend to diversify their sources of imports of this strategic resource, especially oil, in order to avoid the pressures, they may be exposed to when crises occur in the global energy market. For example, the United States seeks to reduce its dependence on Gulf oil and replace it with African oil, especially found in the Gulf of Guinea.⁽³⁷⁾

▪**Political stability and ensuring energy security:** The major energy consuming countries have realized the necessity of dealing in accordance with standards that reduce the effects of the risks of political instability in producing countries by developing strategies aimed at mitigating the risks to which they are exposed.⁽³⁸⁾

Protecting energy supply lines: Energy security requires protecting the supply of vital resources, including oil. For example, the United States of America deploys its forces in areas with large oil reserves (the Arabian Gulf and the Caspian Sea). Likewise, Russia has attached great importance to the security of its oil and mineral supplies through the new military doctrine announced by Russian President Vladimir Putin on April 21, 2000. As for China and Japan, they have adjusted their security policies in accordance with the new economic priorities, as they began to expand their influence in the China Sea. Southern, this region potentially contains huge reserves of oil and natural gas.⁽³⁹⁾

Expanding investment policy: The major energy importing countries seek to secure safe energy sources free from crises, and based on strengthening the concept of energy security, these countries sought to

motivate their companies active in the energy field to increase their investments by increasing exploration and drilling in Countries with important energy reserves, which we notice through China, for example, adopting a strategy of going abroad in order to secure

Its energy supplies, which explains the increased activity of Chinese oil companies in Africa.⁽⁴⁰⁾

Establishing specific policies and laws aimed at protecting or achieving sustainable energy security by the state in the long term, such as moving towards a clean energy economy.

Conclusion:

Based on the above, it becomes evident that defining a universally accepted concept of energy security is challenging due to its evolving nature and its association with a myriad of challenges impacting energy policies at both national and global levels.

The prevalent notion of energy security revolves around the assurance of uninterrupted and stable energy supply. Achieving energy security entails ensuring a significant reserve, maintaining a balance between supply and demand, fostering a stable market, and ensuring energy availability at affordable costs. Diversifying energy sources, particularly renewable ones, is also crucial in this endeavor.

In essence, energy security is a multifaceted concept that necessitates a holistic approach, taking into account various factors such as supply stability, market dynamics, cost considerations, and source diversification. As energy landscapes continue to evolve and new challenges emerge, the concept of energy security will likely evolve in tandem, requiring ongoing adaptation and refinement of strategies to address emerging threats and ensure sustainable energy access for all.

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