

ENERGY SECURITY AND NATIONAL RESILIENCE IN INDONESIA: A THEORETICAL AND POLICY ANALYSIS WITHIN THE GLOBAL ENERGY TRILEMMA FRAMEWORK

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ABSTRACT

Energy security has emerged as one of the most critical pillars of national resilience in the contemporary global system, particularly for developing and resource-dependent states. Indonesia, despite its historical status as an energy-rich country, has experienced a progressive erosion of its energy security position over the past two decades. This article provides an extensive, theory-driven, and policy-focused analysis of Indonesia's energy security challenges by integrating global energy security frameworks with national empirical realities. Anchored in the World Energy Council's Energy Trilemma framework, this study examines the dimensions of energy security, energy equity, and environmental sustainability as they apply to Indonesia's evolving energy landscape. Drawing strictly on the provided references, the article situates Indonesia's experience within both international security studies and domestic policy developments, including the country's transition from oil exporter to net oil importer, persistent reliance on fossil fuels, structural inefficiencies in energy governance, and regulatory responses through national energy policy instruments. Through a qualitative, descriptive, and interpretive methodological approach, the study demonstrates that Indonesia's declining performance in regional energy security rankings is not merely a function of resource scarcity but is deeply embedded in institutional design, policy implementation gaps, geopolitical vulnerability, and competing development priorities. The article further engages with securitization theory to conceptualize energy as a non-traditional security issue, highlighting how energy insecurity intersects with economic stability, fiscal risk, environmental degradation, and social welfare. By offering an extensive discussion of findings, theoretical implications, limitations, and future research directions, this article contributes to both the academic literature on energy security and the policy discourse on sustainable energy governance in Indonesia and comparable emerging economies.

Keywords: Energy security, Indonesia, energy trilemma, national energy policy, non-traditional security, sustainability

INTRODUCTION

Energy has long been recognized as a fundamental driver of economic growth, social development, and state power. In the modern era, the availability, affordability, and sustainability of energy resources have become inseparable from broader questions of national security and international stability. The concept of energy security, once narrowly associated with the uninterrupted supply of fossil fuels, has evolved into a multidimensional framework encompassing economic, environmental, political, and social considerations (Buzan, 1991; Buzan & Hansen, 2009). For developing countries such as Indonesia, energy security occupies a particularly complex position, as it must reconcile rapid economic growth, population expansion, fiscal constraints, and environmental vulnerability.

Indonesia's energy paradox is striking. Endowed with substantial natural resources, including coal, natural gas, and renewable energy potential, the country nonetheless faces

persistent energy insecurity. Since 2003, Indonesia has experienced a structural oil deficit, transforming it from a net oil exporter into a net importer, thereby increasing its exposure to global price volatility and geopolitical risks (Indonesia Defisit Minyak Sejak 2003, 2019). This shift has had profound implications for national energy policy, fiscal sustainability, and economic resilience. Moreover, comparative assessments indicate that Indonesia's energy security performance lags behind regional peers such as Thailand and the Philippines, despite Indonesia's larger resource base and economic scale (Septian, 2018).

The World Energy Council's Energy Trilemma Index provides a comprehensive framework for assessing national energy systems based on three interrelated dimensions: energy security, energy equity, and environmental sustainability (World Energy Council, 2018). Indonesia's performance within this index reveals

EUROPEAN FRONTIERS IN CURRENT SCIENCE AND RESEARCH

persistent structural weaknesses, particularly in ensuring long-term supply security and managing the environmental consequences of fossil fuel dependence. These challenges are compounded by policy fragmentation, institutional inertia, and the difficulty of aligning short-term political priorities with long-term sustainability goals.

From a theoretical perspective, energy security can be understood through the lens of non-traditional security studies. Buzan, Waever, and de Wilde (1998) argue that security issues are socially constructed through processes of securitization, whereby certain challenges are framed as existential threats requiring extraordinary measures. Energy security in Indonesia increasingly fits this characterization, as disruptions in energy supply or price stability have immediate and far-reaching consequences for economic growth, social welfare, and political legitimacy. The Indonesian government's repeated efforts to reform energy subsidies, diversify the energy mix, and strengthen regulatory frameworks reflect an implicit recognition of energy as a core security concern (Riza & Amir, 2014).

Despite the growing body of literature on energy security, there remains a gap in comprehensive, theory-driven analyses that integrate global frameworks with Indonesia's specific policy and institutional context. Many existing studies focus on technical aspects of energy supply or provide descriptive policy overviews without sufficiently engaging with security theory or comparative analysis. This article seeks to address this gap by offering an extensive and deeply elaborated examination of Indonesia's energy security challenges, grounded strictly in the provided references and enriched through theoretical interpretation.

METHODOLOGY

This study adopts a qualitative, descriptive, and interpretive research design. The methodology is based on an in-depth textual analysis of primary and secondary sources contained within the provided reference list. These sources include international reports, government regulations, academic journal articles, and policy briefs. The choice of a qualitative approach is justified by the study's objective to explore conceptual, theoretical, and policy dimensions of energy security rather than to test quantitative hypotheses.

The analytical framework is built around the World Energy Council's Energy Trilemma Index, which serves as the primary evaluative lens for assessing Indonesia's energy system (World Energy Council, 2018). This framework is complemented by insights from international security studies, particularly the Copenhagen School's securitization theory, to contextualize energy as a non-traditional security issue (Buzan et al., 1998). By integrating these perspectives, the study is able to examine energy security not only as a technical or economic issue but also as a socially constructed

and politically mediated phenomenon.

The methodological process involves several stages. First, key concepts related to energy security, energy policy, and national resilience are identified and defined based on the academic literature. Second, Indonesia's energy trajectory is examined through descriptive analysis of historical developments, including the oil deficit since 2003, changes in the primary energy mix, and comparative regional performance. Third, national policy instruments such as the Presidential Regulation No. 5 of 2006 and Government Regulation No. 79 of 2014 are analyzed to assess the state's strategic response to energy security challenges (Kementerian ESDM, 2006; Kementerian ESDM, 2014). Finally, the findings are interpreted through a theoretical lens to identify broader implications, limitations, and future research directions.

RESULTS

The analysis reveals several interrelated findings regarding Indonesia's energy security. First, Indonesia's decline in energy security is closely linked to structural changes in its energy production and consumption patterns. The country's oil deficit, which began in 2003, represents a critical turning point that fundamentally altered Indonesia's position in the global energy system (Indonesia Defisit Minyak Sejak 2003, 2019). As domestic production failed to keep pace with rising demand, Indonesia became increasingly reliant on imported oil, exposing the national economy to external shocks.

Second, the composition of Indonesia's primary energy mix remains heavily skewed toward fossil fuels, particularly coal and oil. While coal has provided a degree of supply security due to abundant domestic reserves, it has also intensified environmental and social costs, undermining the sustainability dimension of the energy trilemma (Bauran Energi Primer, 2018; Made, 2010). Renewable energy development, although recognized as a strategic priority in national policy documents, has progressed slowly due to regulatory complexity, investment barriers, and infrastructure constraints.

Third, comparative assessments indicate that Indonesia's energy security performance is weaker than that of several regional peers. Septian (2018) highlights that countries such as Thailand and the Philippines have achieved relatively better energy security outcomes despite having fewer natural resources. This finding suggests that governance quality, policy coherence, and institutional effectiveness play a more decisive role than resource endowment alone.

EUROPEAN FRONTIERS IN CURRENT SCIENCE AND RESEARCH

Fourth, national energy policies reflect an evolving but incomplete response to these challenges. The Presidential Regulation No. 5 of 2006 established a long-term vision for national energy management, emphasizing diversification and sustainability (Kementerian ESDM, 2006). This was reinforced by Government Regulation No. 79 of 2014, which sought to update and strengthen the national energy policy framework (Kementerian ESDM, 2014). However, implementation gaps, inconsistent enforcement, and competing policy objectives have limited the effectiveness of these measures.

DISCUSSION

The findings underscore the importance of viewing energy security as a multidimensional and dynamic process rather than a static condition. Indonesia's experience illustrates how energy insecurity can emerge not from absolute scarcity but from structural imbalances, governance weaknesses, and policy inertia. From a theoretical standpoint, the securitization of energy in Indonesia reflects broader trends in international security studies, where non-traditional threats increasingly shape national security agendas (Buzan & Hansen, 2009).

The reliance on fossil fuels presents a central dilemma. On one hand, coal and oil have supported economic growth and energy access. On the other hand, they have generated fiscal risks, environmental degradation, and long-term vulnerability. The Energy Trilemma framework highlights this tension, revealing how progress in one dimension can undermine others if not carefully managed (World Energy Council, 2018). Indonesia's challenge lies in achieving a more balanced energy system that enhances security and equity while minimizing environmental harm.

Several limitations must be acknowledged. This study relies exclusively on the provided references, which constrains the scope of empirical data and precludes the incorporation of more recent developments. Additionally, the qualitative nature of the analysis limits the ability to assess causal relationships quantitatively. Future research could build on this foundation by incorporating longitudinal data, comparative case studies, and stakeholder analysis to deepen understanding of energy governance dynamics.

CONCLUSION

Indonesia's energy security challenges reflect a complex interplay of resource dynamics, policy choices, and institutional capacity. Despite significant natural endowments, the country faces persistent vulnerabilities arising from fossil fuel dependence, import reliance, and governance constraints. By situating Indonesia's experience within the Energy Trilemma framework and non-traditional security theory, this article demonstrates that energy

security is not merely a technical issue but a central component of national resilience and sustainable development. Addressing these challenges will require not only policy reform and technological innovation but also a fundamental rethinking of energy governance as a core security concern.

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