Book Review: The Nordic Dimension of Energy Security[1]

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Abstract: *The Nordic Dimension of Energy Security* aims to problematize the narrow conceptualization, contextualization and fossil fuel-based practices of energy security in the context of climate security. Energy has a key role in political, economic, social, cultural, environmental, ontological and climate security issues. The connection between energy and security contains various concepts, contexts and affects the civilizational development of human societies. The author demonstrates that the Nordic states pursue sustainable energy security policies and energy cooperation strategies with the Baltic states and European Union member states, while actively engaged in peace building activities. In this regard, the Nordic states have been evaluated as reference role models to remedy the narrow and traditional energy security approaches and to internalize renewable energy sources.
Key words: energy security, Scandinavia, Multi-dimensional threats

Introduction

Energy security and the energy sector of the Nordic states, formed by Denmark, Finland, Iceland, Sweden and Norway, deserve careful elaboration and attention. In this spirit, the author provides detailed, historical and comparative analysis of the energy vision of the Nordic states to provide critical lenses in decision-making processes. The Nordic states have an important role in the energy integration, cooperation and participation processes with their environmentally friendly methods. Pursuing a balance between energy security and climate security, while focusing on the social awareness and social acceptability aspects of the energy security and stimulating the industries to develop ecologically appropriate technologies have been evaluated as critical Nordic strategies to contribute to the sustainable energy security in the long term.

There are political, economic, industrial and social challenges to actualize the total independence from fossil fuels. But still, engaging with the energy and environmental security-related experiences of the Nordic states may clarify the ways and means to construct laudable conditions in the context of the climate crisis. In this regard, the author also focuses on the energy security and energy vulnerability of the European Union (EU) and Baltic states, while evaluating the Nordic states as reference cases to harmonize the relationship between energy security and climate crisis. Descriptive and comparative analysis of the energy security of the EU, Baltic and Nordic region may be evaluated as valid and sound to demonstrate transnational and solidarity-oriented approach in International Relations (IR).

Multi-dimensional risks and threats, which are associated with the impacts of the climate crisis, may be evaluated as the starting point to problematize traditional approaches, to develop an appropriate definition of energy security and to contribute to energy cooperation. Attention

[1] Ryszard M. Czarny, The Nordic Dimension of Energy Security, Switzerland, Springer Nature, 2020.

should be devoted to the relationship between energy security and climate security to understand and to challenge traditional approaches. The climate crisis, in this respect, may be evaluated as the starting point to redefine and reconceptualize energy security, as exemplified by the policies of Nordic states. Environmental well-being as the reference subject of the energy security may be effective to provide joint undertakings, comprehensive responses and timely resolutions against the impacts of climate crisis. The author argues that linking energy security and climate policy requires transforming the global energy system and changing taken-for-granted assumptions about the concept of security as well. In this regard, he examines the characteristics and challenges, resulting from the energy model and culture of the Nordic states.

Summary and Evaluation of the Chapters

In the first chapter, the author argues that concerns about national security, economic interests and adequate supply of energy resources have dominated energy security policies. Explanations about energy security have thus been subject to different approaches, prioritizations and compartmentalization. The differentiated or specialized conditions and interests may obstruct efforts to develop a working definition that satisfies the needs, demands and policy choices of all of the agents in IR. But still, it is necessary and rational to develop a more comprehensive perspective in which environmental impacts of energy resources, integration and cooperation mechanisms in the energy market and infrastructure security are also analyzed. In this regard, the author also explains the international cooperation mechanisms to ensure environmental security from historical and critical perspectives.

In the second chapter, the author formulates the justificatory reasons to internalize Renewable Energy Sources (RES) from political economic and sustainable development perspectives. Energy alterations, changes in the energy availability and capacity conditions of the states, impacts of the energy poverty, energy inaccessibility and electricity insecurity, the role of water security, technological and economic inequalities, which may jeopardize the compensation of fossil fuels and obtainment of energy from solar, wind and water are also explained and analyzed. The author examines the dimensions of energy security, including affordability, reliability and sustainability, with an emphasis on the sectoral interactions and market dynamics. The author also demonstrates how the dimensions of energy security allow us to appreciate the role of geopolitical, geoeconomic and environmental perspectives.

The author addresses the risks and threats in demonstrating the problematic aspects of traditional energy security approaches. Environmental insecurities, pollution, increasing energy demand, especially from Asia, increasing energy prices, political instabilities and energy injustices have been evaluated as important challenges in the context of the global energy system. Apart from the emphasis on state, market and environmental-centric perspectives, a marxist critique of traditional energy security may also allow us to appreciate the competing paradoxes and dilemmas in the context of energy security. In this spirit, engaging with the IR theories might have enriched discussions about the global energy dilemmas in energy markets. But the author does not focus on the concept of energy security through the premises of IR theories and does not elaborate on a marxist critique, when mentioning energy poverty, inaccessibility and injustice issues.

Energy security is also intertwined with the gap between the rich and poor in the international system. The author explains how climate policies may produce economic pressures and developmental restrictions for the developing states and poor societies. Technological and capital-intensive policies and costly investments, which are based upon the internalization of renewables, may not be compatible with the economic realities and may produce obstacles in achieving a balance between energy security and climate security at large. Inequalities and injustices may produce challenges for the formation of a solution, which satisfies and unites all of the agents in IR. But still, the author suggests that the policies of governments should focus on energy efficiency solutions and transitions towards RES to mitigate and to shape the future of the global energy system in line with the requirements of climate security. The author briefly provides case studies and reports to demonstrate the contradiction between energy policies and climate security and shares some estimations, compiled figures and scenarios, which indicate the primary role of coal, oil and natural gas in energy mix policies and global energy insecurities.

In the third chapter, the interactions between energy supply and energy demand are analyzed with an emphasis on exporting and importing activities and economic growth. The impacts of the concentration of the proven reserves, discoveries and explorations of coal, oil and natural gas on energy markets and policies are also shared and discussed. The author provides comparative estimations, which indicate the increasing role of natural gas in energy mix policies, and shares the impacts of the increasing energy demand from developing states. Information and analysis about the energy production, consumption and trade by regions, international organizations, states, sectors and fuels are also given to provide a comprehensive approach.

In the fourth chapter, the energy security and climate policies of the EU are examined through a close look into its relationship with Russia. This chapter elaborates that natural gas is one of the key issues for the energy security of the EU. The security of natural gas supply, energy relations between the EU and Russia, energy dependency and environmentally problematic energy-intensive industries of Eastern and Central Europe, fragmentation and integration trends in the EU energy markets, investments and projects to contribute to cooperation, efficiency and energy stability in the EU have also been analyzed. Ensuring the security of natural gas supply from Russia and conflict in Ukraine have been evaluated as critical components that may reveal the vulnerability and divergence of the EU's policy framework and institutional design.

The author briefly emphasizes the viability of a game theory approach to demonstrate the strategies of Gazprom through the pressures of Russia in provoking natural gas competition and in undermining energy solidarity within the EU. The various strategies have been exemplified as price maximization policies, differentiated pricing choices, check and control mechanisms, which are aimed at jeopardizing the introduction of alternative energy resources and infrastructural investments in securing natural gas supply. In response to these strategies, diversifying natural gas suppliers and energy resources, developing energy interconnectivity, solidarity and infrastructure security have been emphasized as important strategies of the EU against the adverse impacts of natural gas dependency.

Supplying natural gas from Caspian Basin and the Middle East, diversifying the transmission routes and trading partners, liquefying petroleum gas and natural gas, adopting regulatory policies to undermine the divergence and unilateral decisions of the EU member states have been important to contribute to energy security of the EU and to mitigate the threats, exemplified by the relationship between the EU and Russia. The author also explains how the relationship between the EU and Russia is defined by various problems, including dependencies, different values and unilateral policies of Russia, aimed at pursuing international influence through the instrumentalization of energy resources, especially natural gas.

The author argues that deteriorating the cohesion of the EU may produce disagreements among the member states, regarding the viability of cooperation with Russia. In this context, it is important to strengthen EU's internal energy market, which is aimed at facilitating energy trade and energy access, converging pricing and taxation, protecting the energy security and rights of European citizens, supporting the interconnectivity, harmonizing the internalization of RES and introducing binding rules to contribute to environmental security, resilience, development of RES and energy solidarity. The author suggests how climate security and RES may be effective in undermining the issues related to the energy dependency of the EU.

EU regulations, resolutions and rules have also been briefly given and interpreted as the representation of the energy autarchies among the member states. Different conditions and policy choices, technical, economic and regulatory barriers have been analyzed in the context of energy policies of the EU. The author explains how Germany, for instance, has pursued wind and solar energy-oriented strategies and green technologies, while France has focused on the development of nuclear energy and technological strategies. Poland, on the other hand, has focused on coal.

In the following sections, the author reminds us that Poland is more vulnerable to energy security challenges in terms of natural gas dependency, energy shortages and the unavailability of key raw materials (Czarny, 2020: 112). In this regard, it is observable that energy and environment-related concerns have a critical role for European integration and cohesion processes. The author also focuses on the energy consumption and trade patterns and advantages / disadvantages of member states at national and international levels. The main idea is that pursuing a common policy and complete integration in the energy market, while ensuring environmental protection may be evaluated as critical challenges for EU integration in the context of energy security.

In the fifth chapter, Nordic states have been analyzed with the inclusion of the political, geographical, socio-economic, technological, cultural, social cohesion, energy integration and ecological categories. The author emphasizes how Nordic states provide a laboratory for the study of energy security and identifies the similarities and differences between the Nordic states, Baltic states and EU member states in terms of energy, electricity, infrastructure and climate security-related conditions and policies, availability of the energy resources and RES potentialities. The Nordic energy market has been analyzed in terms of the liberalization and integration of energy markets, research and development processes, innovation and ecological resolutions. Energy security policies, potentialities and challenges of the Nordic states have also been analyzed and discussed compared to the Baltic states and EU member states.

Both opportunities and challenges have been shared to expand energy cooperation between the Nordic states and Baltic states in the context of the climate crisis. Expanding energy cooperation has been evaluated as critical for the energy security challenges in the Nordic and Baltic Sea regions. In this regard, the author explains mutually supportive components to achieve energy cooperation and solidarity in Baltic Sea region (Czarny, 2020: 111) as follows:

"– liberal model of the internal market;

– sustainable development;

– security of supply".

Given such components (Czarny, 2020: 111), energy cooperation in the Baltic Sea region has been evaluated as critical to contribute to energy security and interconnectivity of the EU member states and Nordic states and to challenge the military presence of Russia in the Baltic Sea (Czarny, 2020: 112-115). The author also emphasizes the role of RES in undermining the energy dependency and electricity insecurity of the Baltic states. Energy cooperation between the Nordic states and Baltic states has thus been evaluated as important to undermine the energy isolation and dependency of the Baltic states and to contribute to EU energy targets, balance and resilience as well. Thus, the main idea is that the energy security of the Nordic states is intertwined with the energy security of the EU and Baltic states.

The author also shares the energy conditions, strategies and RES potentiality of the Baltic states, while looking at the possible energy and environment-related implications of the infrastructural investments and pipeline projects. The author suggests to assess energy security of the Baltic states with the inclusion of both EU membership and political and civil cooperation programs and initiatives with the Nordic states. This suggestion implies developing further cooperation and integration between the Nordic and Baltic states.

In the sixth chapter, the author examines the transformation of the energy security, energy balance and energy market structure of Denmark. The author shares compiled data about the energy production, consumption, importing and exporting activities of Denmark, while evaluating Denmark as a critical case to observe various energy security strategies and legal solutions. The author demonstrates that Denmark has a leading position in the integration of RES. Oil and gas still have an important share in energy mix policies. But the integration of RES has been supported to decline the share of fossil fuels and to achieve sustainable energy security and electricity security. The fuel crisis of the 1980s has produced anxieties in decreasing dependency on fossil fuels and in mitigating environmental impacts. In this regard, Denmark has pursued policies to diversify energy resources through the integration of RES, especially wind energy, the modernization and liberalization of energy market, promotion of investments regarding infrastructural connectivity, smart grids and energy technologies in the context of the climate crisis.

In the seventh chapter, structural changes in the energy security of Finland have been analyzed at national and European levels. The author explains the energy security challenges of Finland in terms of increasing energy demand, electricity security, electricity export from Russia, sectoral dynamics, resilience, share of fossil fuels and climate crisis. The EU

membership of Denmark and Finland has also been emphasized in the context of market integration and harmonization. The author shares how EU membership has allowed Finland to accelerate market competition and to integrate with the European energy and electricity market. The impacts of the oil crisis of the 1970s, energy balance and climate policies have also been discussed from historical and comparative perspectives. The steadily increasing proportion of RES and cooperation with the Nordic and Baltic states contributed to integration, interconnectivity and efficiency in the context of energy security.

Pursuit of reliable energy trade, diversification strategies, compensation of fossil fuels by RES, the role of bioenergy and nuclear energy, innovation in the transportation and aviation sectors have also been critical to achieve energy security and to provide a balance between economic growth and environmental security in Finland. The author acknowledges the role of market integration between the Nordic and Baltic Sea regions on the energy security of Finland. The author also notes the role of public awareness for the internationalization of sustainable development at large as well. Apart from the emphasis on the societal level of energy security, the Arctic identity also compels Finland to develop policies, which contribute to the integration of energy and climate-related insecurities. In this spirit, the author implies that Nordic cooperation may expand to the Arctic region as well.

In the eighth chapter, the energy balance and energy transition process in Iceland are analyzed. The author shares that the increasing oil prices of 1973-1974 and electricity security were effective in compelling Iceland to focus on geothermal energy-related policies (Czarny, 2020: 165-168). Economic and sustainable utilization of geothermal energy has been effective in reducing energy dependency and the share of fossil fuels and in contributing to electricity security. In this regard, concerns about competitive prices and affordability may also be evaluated as critical in disseminating RES. Explorations in the volcanic islands also confirm the high level of geothermal energy potentiality in Iceland. The author discusses the energy availability and potentiality of Iceland and RES-oriented strategies and methods to compensate fossil fuels. The author also confirms the economic and environmental-related reasons to develop RES and to expand energy cooperation with Europe, especially in terms of exportation of hydrogen, RES and energy interconnectivity.

In the ninth chapter, changes in the energy security, energy balance and energy exportation of Sweden have been analyzed and illustrated. The oil crisis of 1973 and concerns about reliable and affordable energy supply, energy dependency and environmental impacts compelled Sweden to adopt ecological and efficient resolutions, diversified policies and appropriate waste management mechanisms. Electricity production is one of the critical areas to observe the environmentally sound impacts of efficient energy policies of Sweden. In this context, electricity and RES play a critical role in the achievement of environmental protection and energy security. The author also explains the compatibility between the security of natural gas-oriented resilience mechanisms of Sweden and the EU.

There have been efforts to increase public awareness during the internalization of the RES transition process. In this context, Sweden takes the social support and acceptability of RES into account to facilitate the energy transition process, while restricting the use of fossil fuels. Although fossil fuels are still used and traded, Sweden pursuits policies in line with

sustainable energy security and supports projects to develop RES energy, including wind, solar and bioenergy. The author explains the resilience mechanisms and emergency responses of Sweden against the impacts of energy disruptions and crises, with an emphasis on the security of natural gas and oil. In this regard, RES and pursuit of cooperation with the EU may also be evaluated as resilience mechanisms in terms of secured, uninterrupted and cost-effective energy supply.

In the tenth chapter, Norway's energy and climate policies are analyzed. The author explains that oil and natural gas production and exportation activities play an important role in the state revenue and trade balance in Norway. Norway conducts oil and natural exploration activities to support the sales of fossil fuels and the flow of income. Norway also pursues RES-based policies and hydropower projects to sustain domestic consumption, while exporting fossil fuels. Technological, institutional and behavioral policies of Norway are also discussed in the nexus of RES and climate security. The author emphasizes the role of market integration, electrification and infrastructure security on energy policies as well.

The author explains how the electrification of energy security in Norway is being extended in terms of hydropower. The efforts to integrate electricity market by Norway, Sweden, Finland, and Denmark also contributed to the achievement of energy security in the Nordic region. The author recommends that the modernization of RES, cross-border interconnectivity and effective distribution and transmission of electricity are required to contribute to energy security, flexibility and resilience. Natural gas cooperation between Norway and the EU has also been emphasized to strengthen infrastructure security, interconnectivity and market integration, which are critical components of energy security as well.

In the final chapter, the author discusses the energy security accomplishments and challenges in the Nordic region, with an emphasis on the notions of environmental protection, climate security and cooperation. The energy sector is inevitably intertwined with policies to mitigate climate change. Even in the Nordic states, with high levels of socio-economic development and prosperity, actualization of the RES transition process is a challenge. In this regard, the author evaluates liberalization and integration of energy markets, innovative resolutions, joint participations, technological developments and public awareness as important parameters to undermine the challenges of the RES transition process.

The author asserts that Nordic states have a leading role for environmental security and well-being at national, European and international levels (Czarny, 2020: 238). In this context, a Norden approach has been emphasized as a reference model to properly conceptualize the relationship between energy security and climate crisis. The author explains that the Nordic interpretation of sustainable development needs to be read as a role model to be followed in pursuing a balance between energy, ecology and climate protection, economic and social welfare.

Concluding Remarks

Overall, the book examines the energy security activities and policies of the Nordic states, both in national and in the European context to demonstrate a holistic approach in the context of the climate crisis. Energy has a critical role in redefining the relationship with the

environment at political, social and industrial levels. In this regard, the idea is to transcend beyond mere material and profit-seeking perspectives in favor of environmental well-being and RES. The author contends to favor liberalization of the energy markets. But he does not elaborate on problems that cannot be resolved through liberalization processes. The problems such as energy poverty, inaccessibility and injustice are not explained in detail and in comparison to the Nordic model, which has been evaluated as an inspiration for social cohesion and economic welfare (Andersen et al., 2007: 11-12).

Despite the inner contradictions and pressures, which have been associated with the globalization process, demographic change and emerging economies in Asia and Latin America, Nordic model has been accentuated as an inspiration and ideal paradigm in search of a better system in terms of economics, social welfare, egalitarian distribution, collective risk sharing and peace. The Nordic model has been described as an ideal combination in between the characteristics of the welfare state and globalization (Andersen et al., 2007: 11-12). Therefore, it would have been important to provide a detailed and critical analysis of liberal understandings of energy security in engaging with the Nordic states as case studies and in favoring the liberalization of energy markets.

The author calls for the recognition and dissemination of *"Nordic ecological culture"* and *"Nordic energy culture"* (Czarny, 2020: 241), which may contribute to environmental compatibility of energy security. The author also emphasizes that the Nordic interpretation of energy security and energy cooperation is involved in the energy policies of the EU and is also capable of affecting international negotiations and *"the ongoing Europeanisation and globalization of energy policy processes"* (Ibid, 2020: 256). This kind of a holistic and comparative perspective may be evaluated as one of the critical strengths of this book.

Energy justice (e.g. McCauley & Heffron, 2018) and critical political economy approaches of energy security might have been elaborated by taking the experiences of developing states and poor societies into account. In this spirit, both mainstream and critical analysis might have been employed for the achievement of energy security. The author does not provide the critique of Anthropocene or Capitalocene, which briefly emphasize *"Nature/Society dualism"*, resulting from capitalism (Moore, 2016: 3), and the need for *"a new thinking about humanity"* (Ibid, 2016: 5), when addressing the need for a change in the relationship between humanity and the physical environment as well. But still, the author acknowledges the role of shared identity in harmonizing energy security policies.

In this regard, it is important to note that the historical, cultural and linguistic ties among the Nordic states, which underpin the development of Nordic cooperation and identity (e.g. Hagemann and Bramsen, 2019: 10; The Nordic Council and the Nordic Council of Ministers, 2019) may also be connected with the development of holistic approaches in the context of energy security. In 2019, the Nordic states shared their vision and commitment, concerning a deeper integration and cooperation in terms of sustainability, climate crisis and environmental well-being. In this spirit, it has been acknowledged that the Nordic Council of Ministers may play an essential role in actualizing the shared vision by 2030. Nordic identity and Nordic solutions, which have been intertwined with the peace, democracy, mobility, cooperation, close relationship with the sea etc. have been emphasized as critical to contribute to climate action

and harmony with the nature (The Nordic Council and the Nordic Council of Ministers, 2019). Therefore, the impacts of shared identity could have been elaborated in detail as well.

Consequently, this book offers critical insights and reference cases to problematize the narrow conceptualization of the relationship between energy and security. Focusing on the connection between energy security and climate security, with an emphasis on the Nordic states in comparison to the EU member states and Baltic states, may be evaluated as one of the key benefits of this publication. The cooperative, integrative, mediative and efficient aspects of the Nordic identity may be further analyzed to provide a constructivist approach to energy security in line with the requirements of climate security. Therefore, the characteristics of the Nordic states may be important in demonstrating an ideal model and a normative force that need to be disseminated in the international society.

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