



OPEN ACCESS

EDITED AND REVIEWED BY
Meysam Majidi Nezhad,
Sapienza University of Rome, Italy

*CORRESPONDENCE
Mahmood Ahmad,
✉ mahmood@sdut.edu.cn

RECEIVED 17 December 2023
ACCEPTED 13 February 2024
PUBLISHED 22 February 2024

CITATION

Ahmad M, Rjoub H and Hussain N (2024),
Editorial: Institutional forces, energy transition,
and climate action: strategies for achieving
sustainable development goals 7 & 13.
Front. Environ. Sci. 12:1357229.
doi: 10.3389/fenvs.2024.1357229

COPYRIGHT

© 2024 Ahmad, Rjoub and Hussain. This is an
open-access article distributed under the terms
of the [Creative Commons Attribution License
\(CC BY\)](#). The use, distribution or reproduction in
other forums is permitted, provided the original
author(s) and the copyright owner(s) are
credited and that the original publication in this
journal is cited, in accordance with accepted
academic practice. No use, distribution or
reproduction is permitted which does not
comply with these terms.

Editorial: Institutional forces, energy transition, and climate action: strategies for achieving sustainable development goals 7 & 13

Mahmood Ahmad^{1,2*}, Husam Rjoub^{3,4} and Nazim Hussain⁵

¹Business School, Shandong University of Technology, Zibo, China, ²MEU Research Unit, Middle East University, Amman, Jordan, ³Department of Accounting and Finance, Palestine Polytechnic University-PPU, Hebron, Palestine, ⁴Department of Banking and Finance, Faculty of Economics, Administrative and Social Sciences, Bahçeşehir Cyprus University, Nicosia, Türkiye, ⁵Department of Accounting and Auditing, Faculty of Economics and Business, University of Groningen, Groningen, Netherlands

KEYWORDS

energy transition, institutional quality, green innovation, climate change, sustainable development

Editorial on the Research Topic

[Institutional forces, energy transition, and climate action: strategies for achieving sustainable development goals 7 & 13](#)

The escalating level of emissions has emerged as a significant global concern among policymakers. The current global consumption pattern, driven by energy-led growth and the depletion of natural resources, poses severe challenges for countries to achieve sustainable development. To address this worldwide issue, the United Nations has implemented sustainable development goals (SDGs), which require nations worldwide to adhere to 17 developmental goals by the year 2030 (UNSDG, 2015). The SDGs seek to rebalance the global order by reorienting the current economic growth trajectory. Among the 17 SDGs, SDG-13 stands out for its focus on climate action. As population and industrialization expand, the demand for industrial energy intensifies. Given that fossil fuels serve as the primary energy source for industries, their combustion exacerbates the climate crisis by augmenting environmental pollution. To effectively address SDG-13, SDG-7, which emphasizes the implementation of renewable and cost-effective energy alternatives, is indispensable. Consequently, it is evident that tackling current environmental challenges necessitates the advancement and exploration of more environmentally friendly energy sources.

The nexus between institutional quality, carbon dioxide (CO₂) emissions, and the transition to renewable energy sources is intricate and interdependent. Robust institutions can play a crucial role in facilitating the shift from fossil fuels to renewable energy sources, which are vital for addressing the climate change and advancing the sustainability of the environment (Ahmad et al., 2021). An effective regulatory framework and transparent and streamlined permitting procedures create a stable and foreseeable environment for businesses that can promote investments in the renewable energy sector. Moreover, transparent and consistent policy indications and adequate funding for research and development provide a favorable atmosphere for innovation and technical progress in

the renewable energy industry. Supportive policies like feed-in tariffs, tax incentives, and renewable portfolio requirements may alleviate market shortcomings and create a fair competition between renewable energy and conventional fossil fuel-based power sources. Enacting stringent institutional regulations and rigorously enforcing policies can compel businesses to curb carbon emissions effectively (Rahman and Sultana, 2022). Thus, enhancing the quality of institutions is indispensable to safeguarding environmental sustainability and alleviating environmental pollution.

In this context, a total of five articles in the present issues empirically examine the linkage between institutional quality, renewable energy transition, and environmental sustainability. For instance, Shabir et al. studied the impact of institutional quality, environmental-related technological innovation, and trade openness on CO₂ emissions in Asia-Pacific Economic Cooperation (APEC) member countries from 2004 to 2018. The outcomes of their investigation reveal that institutional quality and innovation in environmental technologies play pivotal roles in significantly mitigating environmental degradation. In contrast, the findings indicate that trade openness and economic growth are associated with a deterioration in environmental quality across these countries. The authors recommended promoting institutional quality and allocating funding for research and development of environmentally friendly technologies to achieve sustainable development. Bajja et al. analyzed the impact of financial development, energy consumption, and manufacturing activities on Morocco's urban environmental quality from 1971 to 2019. Their findings suggest that financial development and manufacturing activities have a detrimental effect on the urban environmental quality. Conversely, an increase in the manufacturing value added and economic development is associated with improving the urban environmental quality in Morocco.

Yang et al. investigated the impact of China's urban energy policy on atmospheric particulate matter (PM_{2.5}) using a difference-in-difference (DID) model. The author elucidated that China's urban energy strategy yielded a notable 4.84% decline in PM_{2.5} concentrations in the designated pilot cities. Furthermore, this policy exhibited a geographical spillover effect, manifesting in a significant reduction in PM_{2.5} levels in neighboring cities within a 150-km radius. The primary driver behind the observed reduction in PM_{2.5} levels attributed to this program lies in the amalgamation of technological advancements and the allocation of resources toward fostering innovation and upgrading industries. The study conducted by Raza et al. scrutinized the impact of energy utilization on agriculture, food policy, and CO₂ emissions in Pakistan. The authors deduced that the integration of renewable energy

technologies and mitigation measures holds promise for diminishing the carbon dioxide emissions linked to agricultural activities. Nevertheless, the magnitude of this reduction is contingent upon the distinct characteristics of the farm and its energy consumption patterns.

Tan et al. examined the socio-political and psychological factors influencing climate change activities within the framework of the stimulus–organism–behavior–consequence paradigm. The empirical investigation reveals intriguing correlations between socio-political dynamics and psychological elements. Notably, the study establishes that environmental quality and confidence in climate change significantly impact pro-environmental behavior. The findings underscore a proclivity among individuals to prioritize mitigation strategies over adaptation approaches to ensure sustainability. The study implies the necessity of employing enhanced communication strategies to empower individuals already engaged in climate change mitigation and motivate those encountering challenges in adapting to climate change measures.

Author contributions

MA: conceptualization and writing–original draft. HR: writing–review and editing. NH: writing–review and editing.

Funding

The author(s) declare that no financial support was received for the research, authorship, and/or publication of this article.

Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Publisher's note

All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors, and the reviewers. Any product that may be evaluated in this article, or claim that may be made by its manufacturer, is not guaranteed or endorsed by the publisher.

References

- Ahmad, M., Ahmed, Z., Majeed, A., and Huang, B. (2021). An environmental impact assessment of economic complexity and energy consumption: does institutional quality make a difference. *Environ. Impact Assess. Rev.* 89, 106603. doi:10.1016/j.eiar.2021.106603
- Rahman, M. M., and Sultana, N. (2022). Impacts of institutional quality, economic growth, and exports on renewable energy: emerging countries perspective. *Renew. Energy* 189, 938–951. doi:10.1016/j.renene.2022.03.034
- UNSDG (2015). United nations sustainable development goals, 2022. Available at: <https://unric.org/en/united-nations-sustainable-development-goals/>.