



Editorial

Renewable Energy Consumption and Economic Growth—Special Issue

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The world is currently facing a critical environmental crisis, and the shift toward renewable energy sources has become increasingly urgent. However, the impact of this transition on macroeconomic stability and economic output must be carefully considered. This *Sustainability* Special Issue aims to explore the complex relationship between renewable energy consumption and economic growth.

While previous studies have focused on the nexus between renewable energy and economic growth, many unanswered questions and implications still require further assessment. This Special Issue aims to increase the theoretical and empirical evidence on the effects of renewable energy development and deployment on economic growth. It is crucial to consider factors such as a country's stage of development, capacity to absorb new technologies, and dependence on fossil fuel exports or imports to predict the economic results of the energy transition accurately.

This Special Issue contains 14 papers that cover a wide range of topics related to energy use efficiency in various countries and economic sectors. The articles include studies on adopting renewable energy sources, the impact of battery electric vehicles on greenhouse gas emissions in the European Union, the influence of philanthropy on eco-efficiency, and the impact of energy efficiency regulations on energy poverty. Other articles examine the role of economic complexity and export quality on the ecological footprint, the impact of institutional quality and financial development on reducing the ecological footprint without hindering economic growth, and the effect of control of corruption and the income level on African environmental quality. The collection also includes studies on the race to zero emissions in MINT economies, the competitiveness of the cultural industry and its impact on Chinese economic growth, and the impact of educational levels on the energy–growth–environment nexus. The collection concludes with an extensive analysis of how renewable energy and CO₂ emissions contribute to economic growth and sustainability. The collection provides important insights into energy use efficiency theories, methods, and diverse applications.

In conclusion, this Special Issue serves as a call to action for all stakeholders to contribute to the global energy transition by identifying and analyzing the effects of renewable energy consumption on economic growth. It inspires policymakers, researchers, and practitioners to embrace sustainable energy practices and support the development of measures that foster green growth. We hope that this Special Issue will serve as a valuable resource for anyone interested in the future of energy and its impact on the global economy.

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Short Biography of Authors

José Alberto Fuinhas is a renowned expert in the field of economics, holding a PhD in economics and serving as a professor of Monetary Economics and Intermediate Econometrics at the Faculty of Economics of the University of Coimbra in Portugal. With years of experience in his field, Professor Fuinhas is also an accomplished Macroeconomics, Energy Economics, and Environmental Economics researcher. He is affiliated with the prestigious CeBER-Centre for Business and Economics Research, where he conducts groundbreaking research and contributes to developing new theories and practices in his field.

Matheus Koengkan holds a PhD in Economics from the University of Évora and currently works as an Associate Researcher in Energy and Environmental Economics at the University of Coimbra Institute for Legal Research (UCILeR) in Coimbra, Portugal. He has a strong publication record, having authored three books on topics such as “Globalisation and Energy Transition in Latin America and the Caribbean: Economic Growth and Policy Implications”, “Obesity Epidemic and the Environment: Latin America and the Caribbean Region”, and “Physical Capital Development and Energy Transition in Latin America and the Caribbean”. His research has also been published in prestigious WoS/Scopus-indexed journals.

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