
Title

An empirical investigation of the impact of energy consumption, globalization and natural resources on ecological footprint and economic growth, evidence from China, Japan, South Korea and China Taiwan

Abstract

Natural resources are regarded as important indicators that make great contributions to reducing environmental pollution and promoting growth in today's era of globalization. Thus, a more rigorous assessment of the complexity of determining growth and ecological footprint is critical. This study examines the dynamic linkages between globalization, natural resources, renewable and non-renewable energy use, ecological footprint and growth in Taiwan, Japan, China, and South Korea from 1975 to 2020. In terms of the certainty of cross-sectional dependence of panel variable data, this study uses second-generation panel unit root, cointegration, long-term elasticity, and two-way causality estimation tests to obtain reliable and valid results. The findings explore the fact that environmental degradation is substantially mitigated by the using of renewable energy sources, while other underlying factors, such as non-renewable energy sources, natural resource rent (NRR), economic growth, and globalization, exacerbate environmental pollution. In addition, the use of renewable and non-renewable energy, NRRs and globalization drive economic progress. Globalization and ecological footprint have a bilateral causal association. The research analysis supports the feedback hypothesis based on a bidirectional causal relationship between renewable energy use and ecological footprint. Based on the empirical findings of the current study, various policy endorsements are proposed to scare and control environmental damage without hampering growth in specific East Asian economies. © The Author(s) 2024.

Authors

Zhu K.; Ali A.; Zhang T.; zada M.

Author full names

Zhu, Kuiquan (59139070700); Ali, Arshad (57471981800); Zhang, Taiming (57909847700); zada, Muhammad (57208921628)

Author(s) ID

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a7

Affiliations

School of Finance, Finance Major, Dongbei University of Finance and Economics, Dalilan, China; School of Economics and Finance, Northeast Agricultural University, Harbin, China; Finance Department, The University of Edinburgh, Business School, Edinburgh, United Kingdom; Facultad de Administración y Negocios, Universidad Autónoma de Chile, Santiago, Chile

Authors with affiliations

Zhu K., School of Finance, Finance Major, Dongbei University of Finance and Economics, Dalilan, China; Ali A., School of Economics and Finance, Northeast Agricultural University, Harbin, China; Zhang T., Finance Department, The University of Edinburgh, Business School, Edinburgh, United Kingdom; zada M., Facultad de Administración y Negocios, Universidad Autónoma de Chile, Santiago, Chile

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Correspondence Address

K. Zhu; School of Finance, Finance Major, Dongbei University of Finance and Economics, Dalilan, China; email: kuiquanzhu1990@outlook.com

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