Natural Resource Rents and Ecological Footprint In BRICS+: The Moderating Role of Regulatory Quality

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Abstract

Resource-rich economies often face a trade-off between expanding economic wealth and maintaining environmental sustainability. Although the resource rents–environment nexus has been widely studied, the moderating role of regulatory quality remains underexplored, particularly in the context of the expanded BRICS+ following the admission of new members. This study therefore examines the impact of NRR on ecological footprint and evaluates how regulatory quality shapes this relationship using annual data from 2002–2021. The second-generation tests including Cross-Sectional Dependence and Slope Homogeneity tests, then the Augmented Mean Group (AMG), FMOLS and DOLS were employed for the analysis. The results reveal that NRR significantly reduces ecological footprint, and this beneficial effect is strengthened in the presence of higher regulatory quality, suggesting that stronger institutions enhance the environmental benefits of resource revenues. Conversely, economic growth increases environmental pressure, while renewable energy and regulatory quality show limited effects. These findings highlight the importance of strong governance in resource-rich economies. Accordingly, BRICS+ governments should strengthen institutional capacity and channel resource rents toward green investments, such as renewable energy, clean technologies, and conservation programs, while prioritizing innovation and low-carbon strategies supported by effective regulation to achieve sustainable development.

Keywords: environmental sustainability; economic expansion; climate change; environmental degradation; resource-rich economies