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ASSESSING THE ENVIRONMENTAL IMPACT OF MONETARY POLICY IN THE WORLD LARGEST CARBON EMITTERS: AN EMPIRICAL APPROACH

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Abstract

The study examines the effect of monetary policy on carbon emissions of the top ten carbon-emitting countries in the world, including China, USA, India, Russia, Japan, Germany, South Korea, Iran, Canada, and Saudi Arabia. For empirical analysis, data is collected from 1992 to 2020, and the panel cointegration technique is applied for estimation. The independent variables included are income, interest rate, urbanization, energy consumption, trade openness, and government fiscal expansion. The estimated results reveal the long-term negative influence of high interest rates on carbon emissions, suggesting that contractionary monetary policy could potentially serve as a mean to mitigate environmental degradation. Economic growth is found to have a nonlinear influence on carbon emissions, validating the existence of the Environmental Kuznet Curve in these countries. It implies that carbon emissions first rise in tandem with economic growth, but subsequently start to decrease as economic growth continues to rise. Energy consumption, urbanization, and government fiscal expansion are found to deteriorate environmental degradation through increased carbon emissions, while trade upgrades the environment by decreasing emissions. These results are robust with alternative equation specifications and estimation technique. These results have important policy implications.

Key words: carbon emissions, monetary policy, panel cointegration

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