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MODELING THE ROLE OF NATURAL RESOURCES, RENEWABLE AND NON-RENEWABLE ENERGY, AND TECHNOLOGICAL INNOVATION ON THE ECONOMIC GROWTH OF CHINA

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Abstract

To tackle the challenges posed by climate change, it is important to introduce a sustainable pathway that does not hamper China's growth. This paper aims to control climate change by reducing emissions from the growth trajectory. The study examines how resource rent, renewable and non-renewable energy, and technological innovation impact China's growth from 1980 to 2021. To investigate these associations, the study uses Nonlinear ARDL regression. The findings show that there are asymmetries between economic growth, natural resource rent, renewable and non-renewable energy production, and technological innovation. Furthermore, renewable energy has a negative impact on economic growth in the short run but has a positive effect in the long run. Additionally, energy production positively impacts economic growth both in the short and long run. However, natural resource rent can have a negative effect on growth. Finally, technological innovation has a negative impact on growth in the short run but a positive effect in the long run. This paper concludes with possible policy implications such as improving market mechanism that controls the misuse of natural resources by utilizing the latest technological innovation based on our findings.

Key words: growth, natural resources, renewable and non-renewable energies, technological innovation, technology

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