

Towards Sustainable Environment: The Role of Green Energy, Economic Globalization, Foreign Direct Investment, Financial Development and Industrialization. Evidence from the Economies of South Asia.

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ABSTRACT:

Purpose: The human activities such as burning fossil fuels for energy is the main reason for the emission of greenhouse gases (GHG) in the world. The primary factor for climate change and global warming is the emission of these greenhouse gases (United States Environmental Protection Agency 2021). South Asian economies have had substantial development in recent decades, but policymakers are concerned about long-term output stability. Considering this, the use of green energy recognized as effective mechanisms to mitigate CO₂ emissions and promote sustainable growth as guided in core of most recent COP 28.

Design/Methodology/Approach: Consequently, the goal of this study is to investigate the long-run effect of green energy, economic globalization, foreign direct investment, financial development on CO₂ emissions from 1993 to 2023 in selected South Asian countries. Due to the possibility of residual cross-sectional reliance and heterogeneity, the study examined the relationship between the variables using second-generation panel techniques. Previous research used traditional methods (first generation), which is incapable of dealing with the problem of cross-sectional dependence and slope heterogeneity. However, this study explores the dynamic connection using current (second generation) techniques. We used the augmented mean group estimator (AMG) and the common correlated effect mean group (CCEMG) estimate methodologies to evaluate the long-run coefficients, and the Dumitrescu and Hurlin panel causality test to check the causality link flow from one variable to another.

Findings/Results: The empirical findings show renewable energy reduce CO₂ emissions but on the other side economic globalization, foreign direct investment, financial development, industrialization degrade the environment. Dumitrescu and Hurlin (D-H) found a bidirectional causality association between green energy consumption, economic globalization, foreign direct investment, and financial development, industrialization, and CO₂ emissions. This study offers policy recommendations for achieving a low-carbon economy, increasing the use of renewable energy.

Practical Implications: This study also highlight the importance of economic globalization, foreign direct investment, financial development and industrialization because these all play an important role in the economic growth of the countries. And economic growth is the key factor to improve the living standard of the people of these growing economies countries of South Asia.

Originality/Value: This study gives the pathway to the policy makers that how they can achieve the goal of economic growth without degrading the environmental sustainability in South Asian countries.

Key words: *Green energy, Economic globalization, CO₂ emissions, South Asia, COP 2*