Green Finance and Economic Resilience: Does Institutional Quality Matter? The Mediating Role of Renewable Energy

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ABSTRACT

The study examines whether green finance reduces macroeconomic vulnerability in developing economies and whether institutional quality matters. Growth volatility, calculated as the rolling standard deviation of real GDP growth, is used to quantify economic fragility in a balanced panel of 78 developing nations from 2009 to 2024. Fixed-effects estimation is followed by Feasible Generalized Least Squares (FGLS) for heteroskedasticity and autocorrelation, and two-step System GMM for endogeneity and dynamic persistence. Green finance regularly lowers growth volatility, demonstrating that climate-oriented financial flows stabilize macroeconomics. Sustainable finance strengthens resilience, but green finance and institutional quality interact negatively and significantly, suggesting that stronger governance frameworks boost resilience. The mediation study also shows that renewable energy transition is a major transmission route for green finance's direct and indirect effects on macroeconomic vulnerabilities. The findings hold across income sub-samples and dynamic criteria. The analysis shows that financial sustainability and institutional strength are needed to generate resilience dividends, adding to the literature linking sustainable finance and macroeconomic stability. Policy implications include scaling green financial instruments alongside governance reforms to improve long-term economic stability in developing nations and redirect financial resources into efficient renewable energy transition routes.

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