Impact of Renewable Energy on Economic Growth: Cases of MENA Countries

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Abstract: This study examines the impact of renewable energy on economic growth in the MENA region, a topic of significant strategic importance given the region's historical dependence on hydrocarbons and the need to diversify its economies. The focus is on analyzing the potential benefits of solar and wind power in terms of growth, investment, macroeconomic stability, and international integration. Methodologically, the paper employs panel data models, combining fixed effects, random effects, and dynamic models (GMM), using the Hausman test to verify the robustness of the estimations. The sample comprises eight MENA countries, both energy exporters (Saudi Arabia, Algeria, UAE and Kuwait) and importers (Morocco, Tunisia, Egypt and Jordan), covering the period 2000-2024. The results show that solar and wind power have a positive and significant impact on GDP, confirming the role of renewable energy as a driver of sustainable growth. Furthermore, foreign direct investment (FDI) and globalization emerge as key determinants of economic performance, while inflation has a negative effect, and institutional quality (government effectiveness, political stability) is a crucial factor for the success of the energy transition.

Keywords: Renewable Energy, Economic Growth, MENA Countries, Panel Data, FDI, Governance, Globalization