

Public Spending and the Energy Transition: Evidence from Regional Renewable Energy Development in Ukraine

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Extended Abstract

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Abstract Summary

The article examines the role of regional public spending in supporting the energy transition, with a particular emphasis on renewable energy development in Ukraine. The aim of the study is to identify the impact of different types of regional public expenditures on renewable energy production and capacity. The empirical analysis is based on a dataset covering 25 regions of Ukraine for the period 2018-2021 and employs a fixed-effects panel model with Driscoll-Kraay standard errors. This approach ensures the robustness of the results to heteroskedasticity, autocorrelation, and cross-sectional dependence. Logarithmic transformations and quadratic specifications are applied to capture potential nonlinear relationships. The findings reveal significant heterogeneity in the effects of public spending. Expenditures on capital contributions and other economic activities exhibit a positive and increasing impact, whereas spending on energy-saving measures and SME support demonstrates negative dynamics, potentially indicating inefficiency or indirect transmission mechanisms. Electric transport expenditures display an inverted U-shaped relationship, suggesting the existence of an optimal level of funding. Overall, the findings suggest that more targeted public spending can significantly improve the effectiveness of regional energy transition policies.

Presenting Author Biography

Serhiy Lyeonov is a Full Professor of Finance and Doc. Hab. of Economics and Finance, specialising in regional development and sustainable energy economics. He holds positions at the Silesian University of Technology (Poland) and Sumy State University (Ukraine). His scientific work focuses on public finance, renewable energy policy, digitalisation, and economic security, with extensive publications in leading international journals. Prof. Lyeonov actively contributes to regional development and business support initiatives, including participation in EU4Business programmes and strategic planning for regional

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