

Supporting Renewable Energy: Incentive Mechanisms

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ABSTRACT

Filiz Köroğlu Aydın¹, Elif Akbostancı², Gül İpek Tunç³ This thesis is based on panel data analyses by using one way fixed effects method in order to examine the factors that are effective on the development of renewable energy through putting a special emphasis on the role of incentive mechanisms. Two main groups of countries are employed throughout the empirical work one of which includes OECD countries and the other focuses on 40 countries and five different models are formed underneath these groups that have the natural logarithm of renewable energy share in the total primary energy supply of a country as dependent variable. The results indicate that gross domestic product per capita and market deployment policies affect the development of renewable energy positively while CO₂ emissions, energy import dependency, total natural resources rents, and share of fossil and nuclear sources in electricity production have significant and negative effects on it. Our findings support that the market deployment policies are more effective in the European Union which emphasize the importance of creating political continuity and stability for renewable energy development. The results also reveal that having a large geographical area makes the implementation of renewable energy technologies and policies harder throughout the country. This study adds to the existing literature not only by widening the scope of inspected countries but also by introducing three new explanatory variables with significant results.

KEYWORDS Renewable Energy; Market Deployment Policies; Market Based Energy Policies; Research and Innovation Policies; Panel Data Analysis

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