

## The Channels through Which Energy Tax Can Affect Economic Growth: Panel Data Analysis

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**Abstract :** This paper explores the channels through which energy taxes may affect economic growth, using a simultaneous equations model for a balanced panel data of 31 OECD countries over the 1994–2013 period. The empirical results reveal a negative impact of energy taxes on physical investment in the short and long term. This impact is negatively sensitive to the existence and level of public debt. Additionally, the results show that energy taxes have an indirect effect on human capital through their impact on polluting emissions. The taxes on energy products are able to reduce both the flux and the stock of polluting emissions that have a negative impact on human capital skills in the short and long term. Finally, we found that energy taxes could encourage eco-innovation in the short and long term.

**Keywords :** energy taxes, economic growth, public debt, simultaneous equations model, multiple imputation

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