



EKC hypothesis revisited. Structural breaks and nonlinearities in time and space

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Resumen: (*máximo 300 palabras*)

The Environmental Kuznets Curve hypothesis conjectures that environmental degradation initially intensifies when a country's per capita income increases and subsequently subsides after a certain level of income is reached, resulting in an inverted U-shaped relationship between environmental degradation and per capita income.

There is abundant literature on this topic, produced especially in the last 20 years, that corroborates the existence of a positive income elasticity for environmental quality.

We focus on the case of CO₂ emissions from the combustion of fossil fuel, looking at their fundamentals: population, level of output and energy efficiency. We use data on a country level and long time series.

Our research is structured around three main topics which are spatial effects, nonlinearities and structural breaks. Interactions effects are introduced as an additional factor related to CO₂ emissions in a dynamic framework. The EKC predicts a nonlinear relation between development and environmental consciousness but the U-shaped pattern is only one, reasonable, hypothesis among other alternatives that we would like to explore. Finally, the assumption of stability plays a crucial role in this topic that needs to be revised from a time and spatial perspective.

Palabras Clave: (*máximo 6 palabras*) Kuznets Environmental Curve; CO₂ emissions; Spatial effects; Nonlinearities; Structural breaks.

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