

Competing in Pollutants: The Environmental Kuznets Curve and Income Distribution

Effrosyni Diamantoudi, and Eleftherios Filippiadis
Concordia University

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Abstract

Numerous studies have examined the inverted U-shaped relationship between pollution and income stemming from the Environmental Kuznets Curve (EKC) hypothesis. The theoretical models developed to explain this stylized fact suggest that the EKC depends on multiple factors; the most prominent are increasing returns to abatement, high elasticity of substitution between consumption and pollution, and pollution havens due to international trade. So far, the role of pollution as a source of externality has been systematically ignored and deliberately underestimated. The objective of this study is to investigate the potential effect of pollution externality on the derivation of an inverted U-shaped relationship between emissions and per capita income. We adopt a static two-agent model, wherein the utility is additively separable in consumption and total pollution. Individual countries compete in emissions à la Cournot. The analysis of the reaction functions suggests that individual Environmental Kuznets Curves can indeed be obtained in a two-agent model framework. Furthermore, the assumptions of such a model are less restrictive compared to a single agent's model. More importantly, both the relationship between EKC and income distribution and implications about re-distributive policies can be explored.