

Analysis of Causality between Economic Growth and Carbon Emissions: The Case of Mexico 1971-2011

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Abstract : This paper analyzes the Environmental Kuznets Curve (EKC) hypothesis to test the causality relationship between economic activity, trade openness and carbon dioxide emissions in Mexico (1971-2011). The results achieved in this research show that there are three long-run relationships between production, trade openness, energy consumption and carbon dioxide emissions. The EKC hypothesis was not verified in this research. Indeed, it was found evidence of a short-term unidirectional causality from GDP and GDP squared to carbon dioxide emissions, from GDP, GDP squared and TO to EC, and bidirectional causality between TO and GDP. Finally, it was found evidence of long-term unidirectional causality from all variables to carbon emissions. These results suggest that a reduction in energy consumption, economic activity, or an increase in trade openness would reduce pollution.

Keywords : causality, cointegration, energy consumption, economic growth, environmental Kuznets curve

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